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Title:

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Place:

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1920

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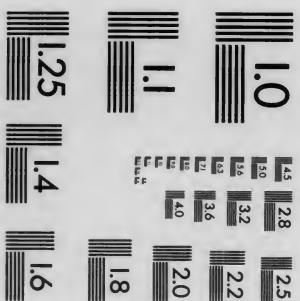
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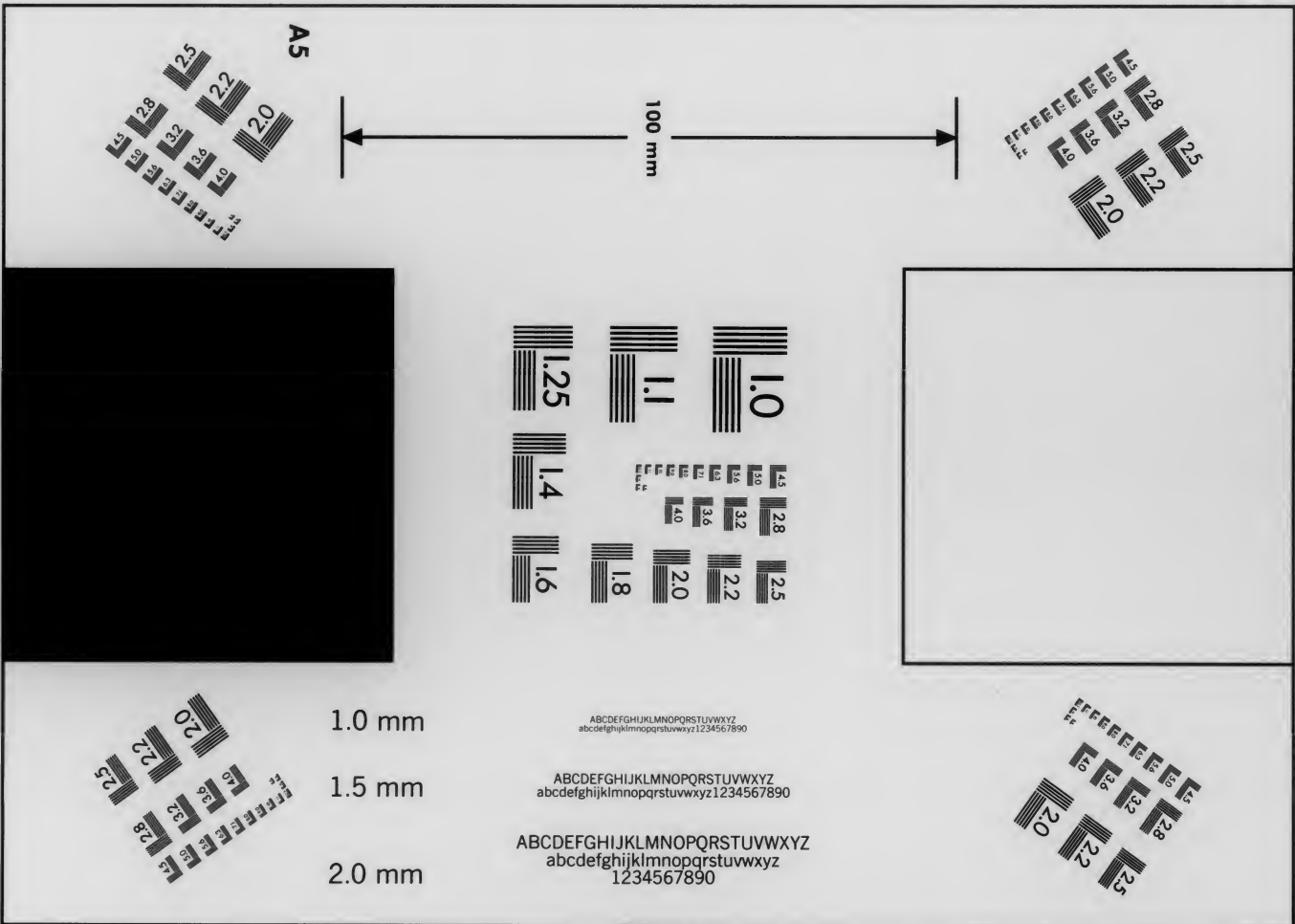
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UNIVERSITY OF WASHINGTON

GENERAL SERIES

JULY, 1920

NUMBER 138

Cost Accounting for Retail Fuel Dealers

BY

WILLIAM E. COX

ASSISTANT PROFESSOR, COLLEGE OF BUSINESS ADMINISTRATION



SEATTLE, WASHINGTON
PUBLISHED QUARTERLY BY THE UNIVERSITY
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Entered as second class matter, at Seattle, under the Act of July 16, 1894.

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FOREWORD

Business is constantly becoming more professionalized. The plane of business competition is being raised; shrewdness is giving way to trained ability. For many years industrial activity was a challenge to strategy. Labor, individually or collectively, established a wage after a protracted period of bargaining. Raw materials were bought and finished products sold in a complicated net work of discounts, commissions and rebates. Production was largely motivated by the driving energy of general managers, superintendents, and foremen, while the consumption of goods stolidly followed well-grooved habits. Everyone in the organization bargained and manoeuvred for advantage in an environment of cleverness and especial privilege.

Although many business men still think and act in terms of the past, an increasingly large number appreciate the new industrial emphasis. The working man is no longer approached as a given quantity of energy to be paid a standard or customary wage, but as a human investment capable of developing an almost unlimited capacity. A large number of human appeals have been developed in the effort to increase productivity. The general manager no longer measures output in direct relation to hours of labor but rather analyzes bonus systems, working conditions, promotions, labor turnover, absenteeism, tardiness, co-operative management and shop committees. The purchasing department is giving more time to the quantity, kind and quality of materials while the marketing division has learned to appreciate changing conditions in demand. The first characteristic of a profession is being fulfilled—the necessity for trained ability.

The production and distribution of products is a service and not solely an activity centering in profit. When production and needs are highly localized the general economic well-being is more readily appreciated than under conditions of modern industry. The ordinary economics of the family unit would curtail an undue application of capital and labor in non-essentials. This is not the case in the larger industrial group where the relation of economy and profit is indirect. Not only should land, labor and capital be directed toward the production of the most essential commodities but their co-operation should be inspired by the

broadest public policy. There is undoubtedly a growing public disposition to reward men in direct relation to their self-sacrifice and public spirit. Business is but an opportunity to serve the needs of the nation. The second characteristic of a profession is the desire to promote the welfare of society, and business is rapidly adjusting itself to this new responsibility. Trained men endowed with the spirit of public service must in due time develop professional pride, and with professional pride comes the fulfillment of the third characteristic of a profession.

The College of Business Administration of the University of Washington desires to promote scientific business development. In furtherance of this cooperation a Bureau of Research has been established to serve as a clearing-house for business information. The present bulletin is presented as an aid in fuel retailing. It may readily happen that many other lines of business activity have problems in which the college might be helpful. The following departments have been created: Accounting; Business Management; Labor; Finance; Insurance; Employment Management; Marketing; Sales; Advertising; Maritime Commerce; Foreign Trade; Statistics; Transportation; Secretarial Training; Investments.

STEPHEN IVAN MILLER, JR.
Dean of College of Business Administration.

ACKNOWLEDGMENT

In addition to the publications quoted elsewhere in this bulletin, the following pamphlets have been found most suggestive:

United States Federal Trade Commission, *"Fundamentals of a Cost System for Manufacturers."* July, 1916. *"A System of Accounts for Retail Merchants."* July, 1916.

United States Fuel Administration, *"A System of Accounts for Retail Coal Dealers."* November, 1917. *"Publications."* 1917-1918.

United States Food Administration, *"Suggested Accounting System for Wheat Flour Millers."* 1918.

Bureau of Business Research, Harvard University, *"Bulletins for Retail and Wholesale Merchants."* 1917-1919.

The College of Business Administration desires to express its appreciation of the services rendered by Mr. Harvey S. Jordan, Commissioner of Retail Coal Merchants of Seattle, in connection with the preparation of this pamphlet; and to make public acknowledgment of its indebtedness to Mr. W. C. Bayles of Bayles Brothers, Seattle, for his invaluable aid, without which this publication could not be given to the retail fuel dealers.

INTRODUCTION

In Bradstreet's Journal of January 31, 1920, on the subject of Business Failures and their Causes, it is stated " * * * the statistics showed that the personal element was the mainspring of business success or failure, and, speaking generally, only those failed who lacked the essentials of good business equipment or judgment. * * * Many years ago Bradstreet's Journal established the statistical fact that business success or failure is largely personal—in other words, that the individual himself is chiefly responsible for failure or success. In 1918 the proportion of failure credited to causes which are classed as originating within the individual himself rose to its highest point, 86 per cent., while outside influences were credited with causing 14 per cent. The 1919 returns were almost identical with this, 85.9 per cent. being credited to the individual and 14.1 per cent. to all other causes. * * * In most of the years during which these statistics have been collected, Lack of Capital led all others in responsibility for failure. This was true from 1890 to 1912, when Incompetence forged to the front. In 1913 and 1914 Lack of Capital again took the lead, but in 1915 Incompetence resumed first place, with 38.2 per cent. of all failures credited to it, as against 30.3 per cent. charged to Lack of Capital. * * * If Incompetence and Inexperience, another form of Incompetence, are combined, it is found that 43.8 per cent. was chargeable to these kindred causes, and the three above accounted for 74.1 per cent. of the 1919 failures, * * *."

Business success or failure depends on the relation of income and expenditure. So long as the income exceeds the expenditure—the true expenditure—the business is succeeding. So long as the expenditure exceeds the income the business is failing. The one of course means a profit, the other a loss. A man may not know his business, he may not know how to buy and sell, or how to manage, he may not know many things necessary to succeed. But if he *knows* the true relation between his income and expenditure, if he knows he is losing money right along, he may, and likely will, escape disaster. Business mortality from Incompetence comes from not knowing that loss is steadily going on. The knowledge of waste comes only when it is too late. There are expenditures which are seen and expenditures which are unseen. The unseen kind are the dangerous ones. A motor truck depreciates every day. Unpaid interest and taxes are accruing right along. Prepaid insurance is not earned. Most merchandise deteriorates from day to day. The services of the proprietor, and of the unpaid members of his family who work for him, are worth something. He might receive rent for his real estate and interest from loaning the remainder of his investment, if these were not used in his business. How much per day for these, and kindred expenses? And how much do they add to the cost of each unit of sale? Most men know the invoice cost of the goods they sell, how much they pay out for freight, rent, insurance, taxes, repairs, postage, stationery, what their pay roll amounts to, and how much they lose from bad debts. But most men do *not* know the cost of doing business. They ignore the unseen items of expense. They do not build up and separate their expenses and sales into logical groups, so the one may be divided by the other to determine the cost per unit. When a sale is made they cannot be sure whether it is made at a profit or at a loss. Unless an accounting system furnishes this information, unless it is surrounded by checks and proofs so the system proves itself and proves that no other leaks exist than those accounted for, the business man

cannot be said to know his business. He is incompetent and belongs in Bradstreet's class where business mortality is high.

A uniform system of accounting and cost-finding is very desirable. Competitors can lose nothing of value, and they can gain much, by comparing their results with the results of their neighbors. Comparisons cannot properly be made without uniformity of data. Delivery cost per unit is found by dividing the total cost of delivery by the number of units delivered. If the total cost of delivery is built up in different ways in different yards, if certain expenses are placed in the delivery group in one yard and omitted in another, if the delivery units are not alike, the results are useless for comparative purposes. Leaks and inefficiency can sometimes be found only by comparing results with those of another dealer. If the delivery cost per ton of one dealer is more than that of another dealer, there must be some reason for this difference. One dealer may deliver with teams and another with trucks. One form of equipment may be more efficient and economical than the other. One dealer may unload his coal into a gravity-bunker, another by elevating machinery, and another by shoveling by hand. One may save a considerable amount compared with the cost of his neighbor. On the other hand the one whose cost of unloading is least, may break his coal so badly in handling that he loses as much from breakage as he saves in unloading. Men cannot be said to know their business unless they know these things, and they cannot be known without some method of comparison. No trade secret is lost, no advantage is yielded, by exchanging efficiency data with another engaged in the same line of work. And this becomes assured if such exchange data pass through capable and disinterested hands, which hand back only the material results without communicating the source or the original data.

Competition was the controlling factor under the old regime. The modern method of governmental price-fixing has not met with general approval. And price-fixing by combinations is against public policy and forbidden by law. It may be a new era is in formation: one in which ignorant competition shall be discouraged or forbidden, and publicity combined with intelligent competition be the rule. Publicity is the taking of the public into one's confidence in a frank and honest way, by frequently laying before the public the true facts regarding costs and profits. The public is willing to pay a reasonable price for efficient service. But neither inefficiency in operation nor exorbitance in price is likely to be tolerated. Ignorant competition tends to destroy competition. If persisted in the efficient will leave the field, the weaker competitors will be forced out of business, until finally a monopoly is created when the strongest alone survives. Competition does not serve its highest and most useful purpose when the result consists solely in making the lowest price. Efficiency and business morality cannot be maintained when men are driven by competition to do business right along at a loss. Society is best protected from unfair prices by building up efficiency and high moral character by the process of insuring protection from unfair and ignorant competition.

A business may be making a profit in one department and losing it in another. Exhibit H shows a net profit from trading of \$1163.93; the net profit on coal was \$2036.14, and the general profits were reduced because wood showed a loss of \$872.19. Every business handling more than one class of commodities should be departmentalized. Dealers in coal and wood who handle sand and gravel, ice, or building material, would find it greatly to their advantage to know the results from trading in each of these departments, and the difficulty of departmentalization is more imaginary than real.

Perhaps it should here be said that the gross margins, expenses, costs, profits, losses and statistics, shown in the various exhibits in this bulletin, while presenting a true and dependable picture of the retail fuel business in Seattle during the year 1919, are not figures from any one yard but are composite figures.

The business described in this bulletin is divided into two departments, Coal Department and Wood Department. An understanding of the simple principles governing their separation will enable one to divide a business into as many departments as is desirable. The cost of Shrinkage, Unloading and Delivery of each is kept separate from the start. Yard and Overhead Expenses, however, from their very nature, cannot properly be distributed until the accounts have been built up and the statistical divisors found. The total expense of unloading coal or wood, divided by the number of tons of coal, or cords or loads of wood, unloaded, evidently will give the cost of unloading a unit of coal, or wood. Likewise the total cost of delivering coal, or wood, divided by the number of units delivered, will give the delivery cost per unit. It is very simple book-keeping to keep several accounts showing the cost of operating teams, or trucks. But teams, and trucks, may deliver, *both* coal and wood, as well as do other kinds of work. As men drive both teams and trucks it is manifest that if we know the time each driver puts in at each kind of work, we at once know how to divide the total expense between the various departments in which the work was done. If we know how much it costs for teams to deliver so many tons of coal, or so many loads of wood—and how much it costs for trucks to deliver so many units—the cost per unit for teams, and the cost per unit for trucks, is quickly found.

It is not difficult to split this further and keep record of the work and cost for each team and truck. But Yard and Overhead expenses must be divided in a more arbitrary way. If one may assume that a ton of coal and a half-cord load of wood are equivalent units of cost, that they should bear equal shares of Yard and Overhead expenses, then the number of units of each passing through the yard becomes the divisor for Yard Expenses; and the number of units of each which are sold and delivered (after adjusting for Sales at Yard) becomes the divisor for Overhead Expenses. The skeleton of the plan is to arrange the expenses into natural groups, and to keep statistical record of the work done, so the latter may be a true divisor of the former. But it is of vast importance that the expense groups contain *all* the expenses—the unseen as well as the seen—or, like when sailing at sea with a false chart, the ship may go upon the rocks.

The Gross Margin Accounts constitute a very necessary group. Here the sales are primarily divided, of course, into two departments, Coal and Wood. Each of these departments is then subdivided according to the kind of sales—Sales Delivered, Sales at Yard and Carlot Sales. If we deduct from the total sales, in any subdivision, the cost of the material sold, the remainder is the gross margin. Cost, in this case, is not the operating cost, or cost of handling, but the initial cost, or cost of the material delivered on cars, or boat, at the dealer's yard. Hence, the gross margin covers both the operating cost and the profit. The sum of the operating cost, when found, plus the theoretical profit, multiplied by the number of units sold in that subdivision, will give the total theoretical gross margin in that subdivision. Comparing this theoretical gross margin with the actual gross margin will prove the accuracy of the work.

Accurate cost finding being essential to success, a Miscellaneous Accounts group is provided for the purpose of keeping out of the trading revenue and ex-

pense groups those items of income and outgo which attend, but do not belong with, the sale of merchandise.

By virtue of its relationship with the American business man, the Federal Trade Commission is in position to speak authoritatively on the advantage of an efficient cost system. In its circular, of January 1916, the Commission says:

"Among the several methods by which the Federal Trade Commission can be of constructive help to American business, there are two of particular importance. One of these is to aid the business men of the country in obtaining the additional credits to which their business operations may entitle them. The second is to aid in improving accounting practice and in establishing better standards of bookkeeping and cost accounting. The two are interdependent.

"The small manufacturer, the country storekeeper, and the retail merchant often do not get at the banks the credit that they ought to receive, owing to the fact that they are unable to present balance sheets in accordance with good business practice. These men as a rule are just as good business men, in many respects, as those of larger operations. They have brains, ability, knowledge of their wares and of their customers, but they do not speak the language of the banker in that they are not able to present a statement showing their true assets and liabilities.

"Frequently a business man with a credit of a few hundred dollars at his bank, based wholly on personal grounds, could, if he could produce a reliable balance sheet, readily obtain sufficient credit to enable him to rapidly expand his business along sound lines. Failing to obtain such credit, his business is limited and confined.

"Ability to borrow at the bank has a far-reaching effect on all credit, because to the bank, primarily, are directed inquiries for a rating of a manufacturer or merchant seeking credit for goods. An unfavorable or non-committal report from the bank results in a curtailment of opportunity. It also checks expansion.

"Bankers are in business to loan money to business men, and recognize that loans made on balance sheets that show a healthy condition are desirable loans. The banker will welcome any standard form of statement that will permit him easily to ascertain the exact liabilities and assets of his customers.

"It is recognized that no one standard system of accounting is applicable to all classes of business, but that special systems are required for each group or class of commerce and industry. For example, the coal industry can use a substantially standard system of accounting; similarly, the country store and general store retailer, the wholesale grocer, the retail grocer, the boot and shoe wholesaler, the drug store, the manufacturer of textiles, the manufacturer of machinery, the wholesale clothier, the retail clothier. It is true that a great many systems could be adapted for use in lines other than those for which they are originally arranged, as certain fundamental principles underlie the general structure of accountancy which must be recognized by each group.

"The fact must be admitted that in order to put a selling price on a product a manufacturer must first know what it costs to manufacture and sell it. When business was done on a large percentage of profit

this was not so essential, but in most lines of industry today the larger percentage of profit has passed. Manufacturers are working on smaller margins and must absolutely know what their goods cost. Any unreliable method of arriving at cost figures, with margins of profit so close, must be eliminated.

"It is a fact well understood among business men that the general demoralization in a large number of industries has been caused by firms who cut prices not knowing what their goods actually cost to manufacture, and the cost of selling, which is equally important, is almost wholly lost sight of.

"A manufacturer who does not know with a close degree of accuracy what it costs him to produce the different articles he manufactures and what it costs him to sell them, is not in a position to intelligently meet competition and invites business disaster.

"Many of the larger manufacturers have thorough cost accounting systems, which they recognize as necessary in order to give them the information essential to successful management. On the other hand, the number of smaller manufacturers who have no adequate cost accounting system and who price their goods arbitrarily is amazing.

"Proper accounting for the smaller manufacturer is most essential. It is necessary for his success that he knows on what particular article he is making a fair profit and on what he is making only a narrow margin of profit or losing money. If he has this information he can concentrate on the manufacture and sale of the product on which the profits are satisfactory.

"Whole industries, in many instances, are suffering from a general lack of intelligent knowledge of cost."

The ascertainment of the true cost of doing business is not enough to guarantee reasonable profit for the business man: the results of the analytical cost system must be effectively utilized. In this connection, the Burroughs Adding Machinery Company, in their hand-book "Statement of Business," suggests on "Fixing Prices to get a Profit":

"Nine-tenths of all retailers are making less than they think they are. They are always surprised when they find it out.

"When you sell \$1 worth of goods, you say that a certain percent of that is profit, a certain percent goes for cost of doing business and the balance is for the cost of the goods.

"Take some item in your stock and deduct the two percentages from the selling price you have established and see if you still have cost price left.

"Your profits and cost of doing business come out of the dollar you take in—not out of the 60 or 70 or 80 cents you pay out for the article.

"If you buy a pair of shoes for \$2 and sell them for \$3, your profit comes out of the \$3—not the \$2. The profit can only come out of the selling price.

"Suppose your cost of doing business is 22%, and you add this to the cost of the goods and then add 10% of the cost price for the profit. This 10% net profit looks good on paper, but that is the only

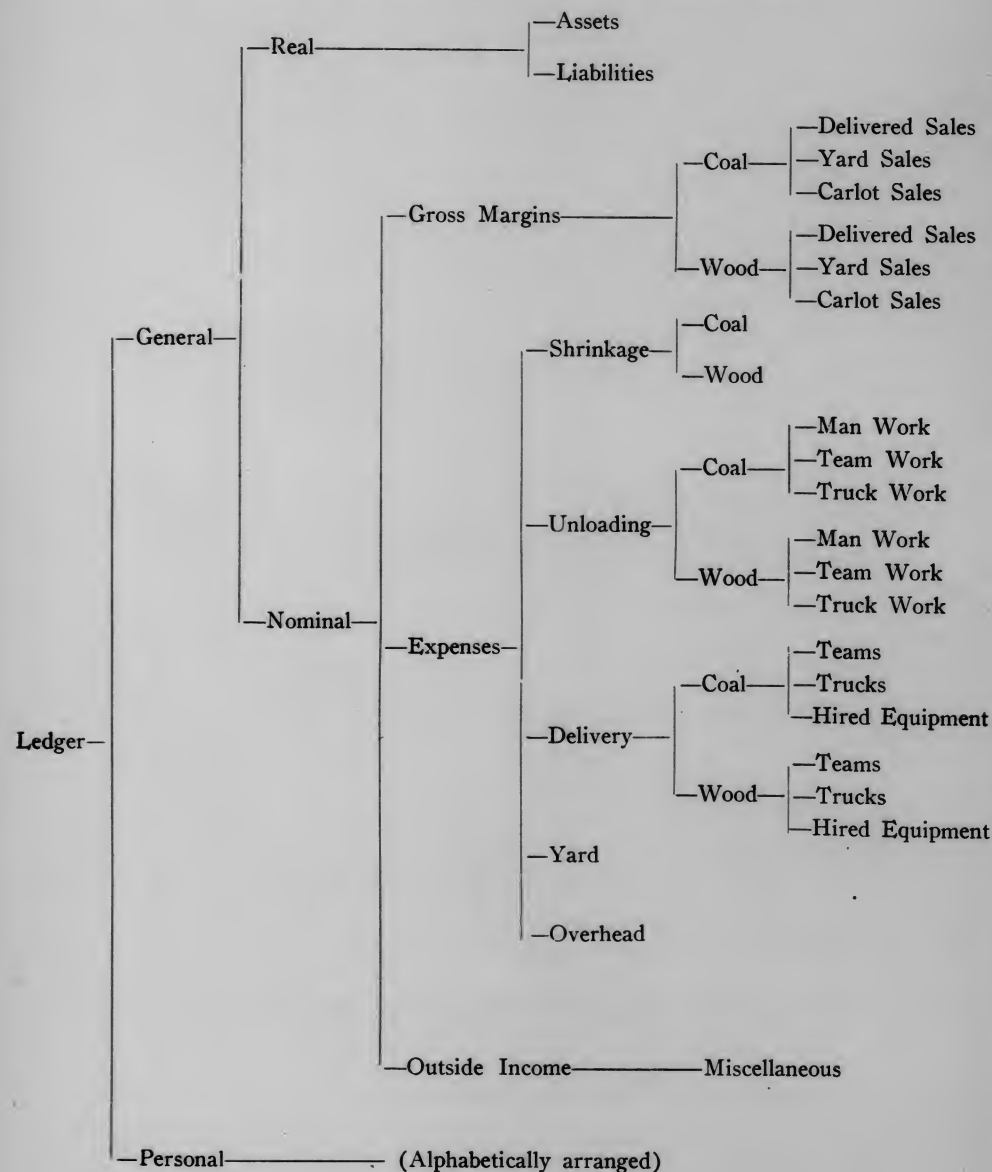
place it can be found. It isn't in the cash drawer and it isn't in the bank.

"If you think you could make a good profit on that basis, figure it out. Take an article that costs \$1.00, add 22% or \$.22 for the cost of doing business and then \$.10 for profit, making the selling price \$1.32. Now the cost of doing business is figured on the selling price and is therefore 22% of \$1.32, which is \$.29. The cost of the article is \$1.00 and subtracting \$.29 from \$1.32 leaves just \$.03 profit; or a trifle over 2¼% profit on the selling price instead of 10%. You can get 4% on your money from the savings bank.

"Now if your gross business was \$15,000.00 last year and you figured your 10% profit on the above basis, you would look for \$1,500.00 profit in the bank; but instead of that you would only find 2¼% of the \$15,000.00 or \$337.50.

"Here is the way the selling price should have been figured out if the cost to do business is 22% and it is desired to make 10% net profit. We want to find the selling price of an article that cost \$1.00; now the selling price is made up of the cost of the article, the cost to do business and the profit. The cost to do business is 22% and the profit is 10%; the two together amount to 32%. The selling price is represented by 100% and if the cost to do business and the profit amount to 32% the balance of 68% must represent the cost of the article or \$1.00. If 68% of the selling price is \$1.00 then the whole selling price is 100 divided by 68 which is \$1.47. Therefore to make 10% profit on a dollar article it must be sold for \$1.47."

SKELETON OF LEDGER ACCOUNT GROUPINGS



THE ACCOUNTS AND THEIR EXPLANATIONS

The ledger accounts are separated into two primary groups, general and personal. The personal accounts are arranged in alphabetical order. The general accounts are divided into real and nominal accounts. Real accounts are divided into assets and liabilities. The nominal accounts are divided into gross margin accounts, expense accounts, and outside income accounts. Expense accounts are divided into shrinkage accounts, unloading accounts, delivery accounts, yard accounts, and overhead accounts. Outside income is a miscellaneous group which includes all general ledger accounts not affecting cost determination. The gross margin and expense groups are generally divided into coal and wood groups, and these are again divided as is shown more clearly in the accompanying diagram, Skeleton of Ledger Account Groupings. The symbols are used with the index number of the general accounts to enable the bookkeeper to start new accounts which may be inserted in the proper logical place without disturbing the general index number. For example, if it is desired to start a new account to be inserted immediately after A-3, the existing account can be marked A-3a and the added one A-3b, it being essential that the logical arrangement of the general accounts be maintained.

REAL ACCOUNTS

ASSET ACCOUNTS, (SYMBOL A)

A-1. Cash.

In this system, the Cash Book itself may be the ledger account with cash; the Cash Book being the book of original entry and at the same time a ledger account. All receipts of cash are entered on the left hand page of the Cash Book and all cash disbursements are entered on the right hand page of the Cash Book. When the trial balance is made the totals of the Cash Book are used exactly the same as any other ledger account. At the end of each month the Cash Book should be ruled and the balance be brought down. As an alternative for using the Cash Book as the ledger account, the dealer may pursue the plan of transferring the totals of the Cash Book to a cash account in the Ledger; a separate account may be kept with cash in office and cash in bank if desired.

A-2. Notes Receivable.

Charge this account with all notes, trade acceptances and other evidences of indebtedness received in settlement of any account, and credit this account when such items are paid.

A-3. Accounts Receivable.

For the purpose of keeping the system as simple as possible, even though there is a ledger page for this account and a corresponding one for Accounts Payable, L-2, nothing is to be posted to either of these accounts. They are placed in the Ledger merely to indicate their proper place on the balance sheet. When the balance sheet or financial statement is made, the total of the debit balances of the personal accounts is used as the amount of Accounts Receivable and the total of the credit balances of the personal accounts is used as Accounts Payable, and are shown as such on the balance sheet.

A-4. Reserve for Bad Debts.

This account is not an asset, being placed here only in the interest of clearness, as a proper deduction from Accounts Receivable, in order that the financial statement may show the most exact possible picture of the net amount of Accounts Receivable on which the dealer may depend. At the end of the period, this account is to be credited and Losses from Bad Debts, O-8, is to be charged with an amount thought necessary, estimated from past experience, to cover the probable losses. When an actual loss has occurred, this account, A-4, is to be charged and the proper personal account credited with the loss.

A-5. Coal Stock.

This account starts at the beginning of each year with the inventory of coal as a debit item. Through the period it is charged monthly with the purchases of coal in carload lots and purchases from other dealers, and also with the total amount of freight paid on coal, as will be explained in the next account. At the end of the period, this account is to be credited with the excess cost of coal bought from other dealers, as explained in G-9, and also with the cost of coal as explained in accounts G-4, G-16 and G-18. When degradation and loss on coal is found, as described in the explanation of Form E, A-5 must be credited and S-1 debited with the proper amount of degradation and loss.

A-6. Freight on Coal.

All freight paid by the dealer (not chargeable to shipper) on coal is to be charged to this account. At the end of the month this account is to be credited and Coal Stock, A-5, charged with the debit balance. As the freight on coal finds its way monthly into Coal Stock, A-5, the reason it is charged to A-6 and not to A-5 is to keep a check on the freight bills and insure that none are paid twice. The debit in this account should equal the footings of the freight column for coal from the Carlot Purchase Register covering the same period.

A-7. Wood Stock.

This account is treated for wood exactly as account A-5 is treated for coal.

A-8. Freight on Wood.

This account is treated for wood just as account A-6 is treated for coal.

A-9. Operating Supplies.

This account, like A-3 and L-2, is placed in the Ledger merely to indicate its place on the financial statement but nothing is posted to this account. The inventory amounts for office supplies, automobile supplies, truck supplies, feed and team supplies and blacksmith shop supplies are posted to the proper ledger accounts, O-5, O-7, D-14, D-9 and D-19, and will show up as debit balances in these accounts. All of these, however, are expense accounts, and for cost finding purposes, it is necessary that these inventory balances be removed from the expense groups; otherwise, the amount of goods on hand would be counted in the total of its group of expenses and increase the cost figure. For this reason, the inventory debit balances remain in their proper places on the Ledger and are not shown on the cost sheets, but are taken and placed on the financial statement under the heading Operating Supplies. By this method,

they appear among the assets where they belong and do not disturb the expense accounts when used for cost finding purposes.

A-10. Prepaid Insurance.

Charge this account with the premiums paid on all insurance policies. At the end of the period, a schedule is made of the amount of insurance expired on each kind of property and the amount unexpired. The proper expense accounts should be charged and this account credited with the amount expired. The debit balance then represents the amount unexpired and appears on the financial statement as an asset under the heading Deferred Charges to Operations.

A-11. Prepaid Rent.

This account must be carefully distinguished from O-1. Charge this account with all payments of rent. At the end of the period, the amount expired to date is found, and the amount which is unexpired. Charge O-1 and credit this account A-11 with the amount expired and bring down, as a debit balance in this account, the amount unexpired.

A-12. Prepaid Credit Associations.

Charge this account with all payments to the credit associations and at the end of the period determine the amount which has been earned and the amount unearned. Charge account O-9 and credit this account, A-12, with the amount earned, bringing down, as a debit balance in this account, the amount unearned.

A-13. Prepaid Commissioner.

In Seattle, the fuel dealers have employed an accountant who performs a number of duties and who bears the title of Coal Commissioner. His services are paid from a fund created by assessments on the fuel dealers and such assessment are prepayments. Charge this account with all such payments, and, at the end of the period, determine the amount earned by the commissioner to that date and the amount unearned. Charge account O-9 and credit this account with the amount earned, and bring down, as a debit balance in this account, the amount unearned.

A-14. Miscellaneous Deferred Charges.

It sometimes happens that, at the end of the cost finding period, some payments have been made which really belong in the succeeding period and for which there has been no special account provided. For example, at the close of the cost finding period, the sawn wood on hand represents a certain amount for sawing which is a deferred charge and which cannot properly be included in the gross margin for the period just closing. Such items should be removed and charged into this account until after the new year accounts have been opened when they can be transferred to the original accounts.

A-15. Land.

Debit this account with the purchase price of land used in the business. In any revaluation of land, or other property not for sale, if the new valuation is greater than the book valuation, it is deemed best to show the increase by crediting an account named Appreciation Valuation so as to keep such in-

A-4. Reserve for Bad Debts.

This account is not an asset, being placed here only in the interest of clearness, as a proper deduction from Accounts Receivable, in order that the financial statement may show the most exact possible picture of the net amount of Accounts Receivable on which the dealer may depend. At the end of the period, this account is to be credited and Losses from Bad Debts, O-8, is to be charged with an amount thought necessary, estimated from past experience, to cover the probable losses. When an actual loss has occurred, this account, A-4, is to be charged and the proper personal account credited with the loss.

A-5. Coal Stock.

This account starts at the beginning of each year with the inventory of coal as a debit item. Through the period it is charged monthly with the purchases of coal in carload lots and purchases from other dealers, and also with the total amount of freight paid on coal, as will be explained in the next account. At the end of the period, this account is to be credited with the excess cost of coal bought from other dealers, as explained in G-9, and also with the cost of coal as explained in accounts G-4, G-16 and G-18. When degradation and loss on coal is found, as described in the explanation of Form E, A-5 must be credited and S-1 debited with the proper amount of degradation and loss.

A-6. Freight on Coal.

All freight paid by the dealer (not chargeable to shipper) on coal is to be charged to this account. At the end of the month this account is to be credited and Coal Stock, A-5, charged with the debit balance. As the freight on coal finds its way monthly into Coal Stock, A-5, the reason it is charged to A-6 and not to A-5 is to keep a check on the freight bills and insure that none are paid twice. The debit in this account should equal the footings of the freight column for coal from the Carlot Purchase Register covering the same period.

A-7. Wood Stock.

This account is treated for wood exactly as account A-5 is treated for coal.

A-8. Freight on Wood.

This account is treated for wood just as account A-6 is treated for coal.

A-9. Operating Supplies.

This account, like A-3 and I-2, is placed in the Ledger merely to indicate its place on the financial statement but nothing is posted to this account. The inventory amounts for office supplies, automobile supplies, truck supplies, feed and team supplies and blacksmith shop supplies are posted to the proper ledger accounts, O-5, O-7, D-14, D-9 and D-19, and will show up as debit balances in these accounts. All of these, however, are expense accounts, and for cost finding purposes, it is necessary that these inventory balances be removed from the expense groups; otherwise, the amount of goods on hand would be counted in the total of its group of expenses and increase the cost figure. For this reason, the inventory debit balances remain in their proper places on the Ledger and are not shown on the cost sheets, but are taken and placed on the financial statement under the heading Operating Supplies. By this method,

they appear among the assets where they belong and do not disturb the expense accounts when used for cost finding purposes.

A-10. Prepaid Insurance.

Charge this account with the premiums paid on all insurance policies. At the end of the period, a schedule is made of the amount of insurance expired on each kind of property and the amount unexpired. The proper expense accounts should be charged and this account credited with the amount expired. The debit balance then represents the amount unexpired and appears on the financial statement as an asset under the heading Deferred Charges to Operations.

A-11. Prepaid Rent.

This account must be carefully distinguished from O-1. Charge this account with all payments of rent. At the end of the period, the amount expired to date is found, and the amount which is unexpired. Charge O-1 and credit this account A-11 with the amount expired and bring down, as a debit balance in this account, the amount unexpired.

A-12. Prepaid Credit Associations.

Charge this account with all payments to the credit associations and at the end of the period determine the amount which has been earned and the amount unearned. Charge account O-9 and credit this account, A-12, with the amount earned, bringing down, as a debit balance in this account, the amount unearned.

A-13. Prepaid Commissioner.

In Seattle, the fuel dealers have employed an accountant who performs a number of duties and who bears the title of Coal Commissioner. His services are paid from a fund created by assessments on the fuel dealers and such assessment are prepayments. Charge this account with all such payments, and, at the end of the period, determine the amount earned by the commissioner to that date and the amount unearned. Charge account O-9 and credit this account with the amount earned, and bring down, as a debit balance in this account, the amount unearned.

A-14. Miscellaneous Deferred Charges.

It sometimes happens that, at the end of the cost finding period, some payments have been made which really belong in the succeeding period and for which there has been no special account provided. For example, at the close of the cost finding period, the sawn wood on hand represents a certain amount for sawing which is a deferred charge and which cannot properly be included in the gross margin for the period just closing. Such items should be removed and charged into this account until after the new year accounts have been opened when they can be transferred to the original accounts.

A-15. Land.

Debit this account with the purchase price of land used in the business. In any revaluation of land, or other property not for sale, if the new valuation is greater than the book valuation, it is deemed best to show the increase by crediting an account named Appreciation Valuation so as to keep such in-

crease separate from the proprietor's investment, or the corporation surplus, charging such increase to Land or other account carrying such appreciated property. This increase in value is not to be distributed as dividends or profits. If, however, such property has decreased in value, it is deemed best to charge the proprietor's investment, or surplus account in case of a corporation, with such decrease, and credit the account carrying the asset.

A-16. Buildings.

Charge this account with the cost of all buildings used in the business, treating any increase or decrease in the valuation according to the principles laid down in the description of account A-15. Repairs, taxes and depreciation on buildings are charged to accounts M-3, M-4 and M-5. The original asset account should not be changed from the cost price until such time as the assets are worn out and are taken care of by the depreciation entries.

A-17. Yard Equipment.

Charge this account with equipment used in the yard which is immovable and which does not belong to the class commonly called buildings: for example, railroad tracks, wagon scales and fire equipment. Repairs, taxes and depreciation on yard equipment should be charged to accounts M-3, M-4 and M-5. The original asset account should not be changed from the cost price until such time as the assets are worn out and are taken care of by the depreciation entries.

A-18. Movable Equipment.

Charge this account with the cost price of all equipment used in the business (except office furniture) which is movable, such as trucks, teams, wagons, harness, small tools, electric wagon loader and automobile used in the business. Charge all repairs, taxes and depreciation to the proper accounts, such as D-7, D-8, D-10, D-12, D-13, D-15, D-17, D-18, D-20, O-10, O-11 and O-12. The original asset account should not be changed from the cost price until such time as the assets are worn out and are taken care of by the depreciation entries.

A-19. Office Furniture.

Charge this account with cost of all furniture used in the office, such as desks, tables, stools, adding machines, typewriter, etc., but do not charge this account with such items as stationery, books, etc., which belong in account O-5. Charge repairs, taxes and depreciation on office furniture to accounts O-10, O-11 and O-12.

A-20. Reserve for Depreciation.

Exhibit B shows the method of figuring depreciation adopted in this pamphlet. It will be noted that the straight line method is used. This is done because it is the method used by the Federal Income Tax authorities, and it is deemed best that accounting should be kept in conformity with governmental method. This method is defective to the extent that when property is new and at the height of its efficiency and the repair bills at the minimum, the charge for depreciation is no more than it is at the end of the period when the property is run down and the repair bills are high. But it is deemed expedient to forego a better method and adopt a poorer one in order that the same accounts may be used both in making out the Income Tax Return and in cost find-

ing where depreciation is an expense. If \$3,000 was consumed in five years in the wear and tear of a motor truck, it must be obvious that there was an expense of \$600 for each year or \$50 for each month during the time the truck was run. If this \$50 were paid each month, it would be obvious that it was an expense item. However, many people, in the beginning, pay the entire purchase price of the truck and then forget that it is wearing out and decreasing in value every day.

LIABILITY ACCOUNTS, (SYMBOL L)

L-1. Notes Payable.

Credit this account with all notes and trade acceptances given to others and charge this account when the same are paid. The credit balance in this account will then show the written obligations of the dealer.

L-2. Accounts Payable.

See description of A-3.

L-3. Accrued Interest Payable.

At the end of the year, or cost finding period, credit this account and charge Interest Paid, O-2, with all interest earned and not yet paid. When such interest is paid, the entry should be split, charging this account, L-3, with the amount earned to the end of that period and charging Interest Paid, O-2, with the amount earned after the close of that period.

L-4. Accrued Taxes.

At the end of the year, or cost finding period, ascertain from the County Assessor the assessed valuation of the property and the tax rate, and compute the taxes earned to date, charging the expenses accounts D-12, D-17, O-11 and M-4 and crediting the total to this account, L-4. When the taxes are paid, charge the payment to this account and make the entries necessary to correct any miscalculation.

L-5. Accrued Wages.

At the end of each month, a distribution of pay roll is made from the monthly Time Book charging the proper expense accounts and crediting this account, L-5, with the total of all wages earned during the month. As wages are paid, the payments are charged to this account. The credit balance in this account will represent the unpaid wages earned. It is quite probable that the Time Book for any given month will be distributed as late as the middle of the succeeding month and the balance in this account, L-5, be disturbed by payments made in the latter month. It will facilitate the accountant's work if he uses separate ledger pages for each month: Accrued Wages, January; Accrued Wages, February; etc. When the distribution is made, along with any necessary correcting entries, the past month may easily be balanced, ruled-up and disposed of without disturbing the arrangement of the ledger items of the current or later month.

L-6. Mortgages Payable.

When a mortgage is given, this account is credited; when the mortgage is paid, this account is charged.

L-7. Proprietor's Capital Account.

The credit balance in this account represents the entire investment of the proprietor, or in the case of a partnership, of the several proprietors. If the business be a corporation, this account should be entitled Capital Stock. In the case of a partnership any surplus earnings left in the business are credited to this account, but in the case of a corporation the earnings should be credited to Surplus and not to Capital Stock.

L-8. Accrued Salaries.

The fuel dealers of Seattle have voluntarily obligated themselves to see that their prices on coal and wood shall be made in the same way and with the same margins as when they were under the direction of the United States Fuel Administrator. This means that to the cost of one ton of coal there shall be added 30 cents as the margin of profit, and this total fixes the retail delivered price of a single ton shoveled off in the basic zone, exclusive of the packing charge. A load of wood is priced in the same way. It was the rule of the United States Fuel Administrator that the dealers were entitled to charge salaries in the expense accounts determining the cost of coal and wood, at the rate of 50 cents per ton of coal and 50 cents per one-half cord of wood. Therefore, in Seattle, account O-14 is charged and account L-8 is credited with 50 cents per unit of sales, counting a ton as a unit of coal and one-half cord as a unit of wood, and for the sake of uniformity, it is advisable that this rate be used elsewhere. In the cost figures used in this pamphlet for illustrative purposes, it is assumed that the proprietor does all the work for which salaries usually are paid as distinguished from the work for which wages are paid. In other words, this is the method used in determining the proper amount to charge into expenses for the services of the proprietor. In those concerns, however, which actually employ men on a salary basis who are not interested in the business, if the salaries paid amount to more than this allowable amount, the excess should be charged into some account which does not enter into the cost finding figures, as for example account M-7. At the close of the period this account is closed into account L-9.

L-9. Proprietor's Drawing Account.

In a small business where there is only one proprietor, all withdrawals by him of cash or commodities from the business should be charged to this account, and, at the end of the period, the balance in the account should be closed into account L-7. If there are two or more proprietors, this account should be split into two or more accounts designated, for example, John Doe Drawing Account, Richard Roe Drawing Account. The symbols in such case should be L-9a, L-9b, etc. In the case of a corporation this account should not be used. Any stock-holder who serves the corporation should be paid a stipulated salary like any employee and his withdrawals should be charged, either to L-8, or to his personal account, as preferred.

NOMINAL ACCOUNTS.

GROSS MARGIN ACCOUNTS. (SYMBOL G)

G-1. Coal Sales Delivered.

It will be seen by reference to the explanation of the Sales Sheet shown in Form E that there are four Sales Sheets in use at once. The first is for recording the sales of both coal and wood delivered by teams, the second for deliver-

ies by truck, the third for deliveries by hired equipment, and the fourth for sales made at yard. The first three constitute the delivered sales. Some sales are made for cash and some are charged to the buyer's account, and proper money columns are provided on the Sales Sheets to care for these two kinds of sales. The totals of the cash sales of each Sales Sheet are entered in the Cash Book to the credit of Coal Sales Delivered, G-1, or Coal Sales at Yard, G-5, or Wood Sales Delivered, G-10, or Wood Sales at Yard, G-15, as the case may be. The totals of the charge sales are posted directly to the ledger account of Coal Sales Delivered, G-1, Coal Sales at Yard, G-5, Wood Sales Delivered, G-10, or Wood Sales at Yard, G-15, as the case may be. The result will be that account G-1 will be a credit account which will accumulate the amount of all coal sold delivered, either for cash or on account, regardless of whether it is delivered by team, by trucks, or by hired equipment. It may be added that should the dealer desire to keep record of the deliveries made by each individual truck or team additional Sales Sheets can be used for that purpose.

G-2. Packing Coal and Lineback.

In an ordinary sense this is an expense account and should be placed in some group of expenses, but in Seattle the work of packing coal and lining back is a contract arrangement with the Packers' Union in which the packer gets the entire fee. Nothing can be gained in a cost finding system by illustrating the method of finding the cost of packing-in a ton of coal when one knows the cost in the beginning. The chief reason for placing this account in this position is to insure that it will be deducted from the amount of coal sales delivered and thus eliminate from such sales the amount added thereto for packing. The deduction leaves account G-1 simplified as though all such sales were made by shoveling directly from the wagon into the customer's bin and this especially is desirable in as much as we are chiefly concerned in finding the gross margin on a ton of coal. The problem should not be complicated by showing the cost of the packing in some cases and the cost without packing in others. Therefore, in the cost finding calculations made under the system outlined herein, account G-2 is always treated as a deduction from account G-1.

G-3. Sales Allowances on Coal.

In all buying and selling transactions, it not infrequently happens that some allowance must be made to the buyer in order to settle some disagreement which was not in contemplation when the sale was made. Such allowances on sales of coal delivered should be charged to this account and credited to the personal account of the buyer if it was a charge sale, or to cash, if it was a cash sale. This account, like account G-2, is always a deduction from account G-1, it being assumed that there are no sales allowances on sales at yard.

G-4. Cost of Coal Sold Delivered.

Cost, in this case, is not operating cost but prime cost, and prime cost means the cost of coal in carload lots delivered on dealers' side track, if the coal comes by rail, or alongside the dealers' dock if the coal comes by water. This means cost at the mine plus all transportation charges. The term gross margin means the difference between the prime cost and the selling price. Hence, the gross margin is made up of the operating cost plus the margin of profit. The average selling price is determined easily by dividing the total in account G-1, after deducting accounts G-2 and G-3, by the number of tons sold delivered. The debit

balance in this account, G-4, divided by the number of tons sold delivered will give the average prime cost, and the average prime cost deducted from the average selling price will give the average gross margin. In the description of Form E, two methods are given for finding the cost of coal sold delivered as distinguished from the cost of coal sold at yard and cost of coal sold in carlots. It will be sufficient at this place to say that account G-4 is to be charged with the cost of coal sold delivered, account G-6 is to be charged with the cost of coal sold at yard, account G-8 is to be charged with the cost of coal sold in carlots, and the sum of the three will be credited to Coal Stock, A-5.

G-5. Coal Sales at Yard.

This account is built up from the cash sales and charge sales of the Sales Sheets devoted to sales at yard, as account G-1 is built up for sales delivered.

G-6. Cost of Coal Sold at Yard.

All that it is necessary to say in regard to the building up of this account is found under the description of account G-4.

G-7 Carlot Sales of Coal.

In the retail trade, certainly in Seattle, all sales for profits are either sales delivered or sales at yard, and the coal sold in carlots is usually an accommodation matter of one dealer ordering carlots for a neighboring dealer. This account is created therefore for the purpose of keeping the amount received from such sales and the tonnage thereof separate from the sales delivered and the sales at yard. If this separation is not made the amounts received and the tonnage of carlot sales will disturb the cost finding of the profit making sales. Carlot purchases for other dealers must be entered on the Carlot Purchase Register just as other carlot purchases are entered. These carlot sales of coal must be kept separate from other sales and recapitulated in the proper columns on the sheet Recapitulation of Deliveries and Charges from Sales Sheets and of Carlot Sales, as shown in Form F. Whether these carlot sales to neighboring dealers are charged at the cost price, or at a price which includes a profit, the buyer is to be charged, and this account is to be credited with the amount at the selling price.

G-8. Cost of Coal Sold in Carlots.

See the description of account G-4. The purchase price of this coal is to be charged to this account and credited to Coal Stock, A-5.

G-9. Excess Cost of Coal Bought from Other Retailers.

All carlot purchases are entered on the Carlot Purchase Register as illustrated on Form A and all purchases from other retailers are entered on Register of Purchases from other Retailers as shown on Form B. At the end of each month both of these Purchase Registers are recapitulated and the recapitulation transferred to the record books described in the explanations of Forms C. and D. The cost from the Carlot Register means the sum of the invoice amount and the freight. At the end of the fiscal period, the totals on Forms C and D will show the total number of units purchased and the total cost of the same for each kind of coal and each kind of wood. The recapitulation of carlot purchases, shown on Form C, will give the true average prime cost of each kind of coal or wood by dividing the total cost of each by the number of units of each. The totals in Form D, being purchases from other retailers, show the total amount paid for each kind of material, but this total includes an excess cost above what the material would have cost had it been bought in carlots.

Knowing the quantity bought from other retailers and knowing from Form C the prime cost, it is easy to compute what the total amount of each kind of material bought from other retailers would have cost had it been bought in carlots. Deducting this amount from the actual amount paid other retailers, the remainder will show the excess cost of each kind of material, and the sum of these excesses gives the amount which should be charged to account G-9 and credited to account A-5. In like manner, the excess cost of wood bought from other retailers is found.

G-10. Wood Sales Delivered.

This account is treated for wood as account G-1 is treated for coal.

G-11. Sawing Wood Sold Delivered.

If all, or most of, the fuel dealers owned and operated their own wood-saws, it would be proper to place this account in one of the expense groups. However, it appears that the great majority of dealers hire their wood sawed, and, in this case, the cost of sawing wood is analagous to the cost of packing coal for it is a contract arrangement that can best be handled as packing coal is handled, that is, by eliminating it from the sales.

At the time wood is sawed it is obvious that it cannot be determined what part will be delivered and what part sold at yard. Therefore, the total amount for sawing wood throughout the year, or other cost finding period, is charged to this account and no charge during the period is made against G-16. At the end of the year, or other cost finding period, when the inventory is taken, a correcting entry should be made charging account A-14 with the cost of sawing all the sawn wood on hand, and this amount should be credited to account G-11 so as to insure that the debit balance in G-11 represents the cost of sawing only the wood removed from yard. In this case, it must be remembered in taking the wood inventory that no added value is to be shown for the sawing cost of the sawn wood on hand since this increased value will show among the assets in account A-14. The debit balance in account G-11 must now be divided by crediting account G-11 and charging account G-16 with that proportion which the wood sold at yard bears to the wood sold delivered (expressed in cords) as ascertained from Form F.

G-12. Packing Wood and Stacking.

This account is to be handled for wood as account G-2 is handled for coal.

G-13. Sales Allowances on Wood.

This account should be handled for wood as account G-3 is handled for coal.

G-14. Cost of Wood Sold Delivered.

This account should be handled for wood as account G-4 is handled for coal.

G-15. Wood Sales at Yard.

This account is built up from the cash sales and charge sales of the Sales Sheets devoted to sales at yard as account G-10 is built up for sales delivered.

G-16. Sawing Wood Sold at Yard.

This account is explained in account G-11.

G-17. Cost of Wood Sold at Yard.

This account is built up for wood as account G-6 is built up for coal, both of which are explained in the description of G-4.

G-18. Carlot Sales of Wood.

This account is built up for wood as account G-7 is built up for coal.

G-19. Cost of Wood Sold in Carlots.

This account is built up for wood as account G-8 is built up for coal.

G-20. Excess Cost of Wood Bought from Other Retailers.

This account is built up for wood as account G-9 is built up for coal.

SHRINKAGE ACCOUNTS, (SYMBOL S).

S-1. Degradation and Loss on Coal.

Degradation means the depreciation in the value of coal due to breakage, smaller sizes usually being less valuable than the larger. Loss means the physical loss in weight which comes from either evaporation of the moisture and the volatile matter, or from pilfering, etc. The method of finding the degradation and loss is explained in the description of Form E.

S-2. Shrinkage and Loss on Wood.

There is little, if any, degradation in wood as there is in coal. Wood does not break as coal does. If fire-wood were kept a long term of years there would be a degradation, but practically all is sold within twelve months after it was in the tree so that the degradation is negligible. The word "shrinkage" is used to describe that quantity of wood put on the wagon in excess of the theoretical amount sold as entered on the books. As is well known, the laws governing the measurement of fire-wood are very indefinite and unsatisfactory, and the dealers seek to protect themselves by delivering more wood than they bargained to sell. For example, the average load of forest wood sold in Seattle contains something like 14% more wood than comes from one-half cord. The fear of legal difficulties leads the dealers to sell this quantity and bill it as three-eighths of a cord and usually record the sale on their statistical books as one-half cord. In other words, the dealers commonly give more wood than the records show they sell, and the word "shrinkage" used in this account is intended to refer to this over-load or excess amount actually delivered above what the records show. The method of finding the shrinkage loss is explained in the description of Form E.

UNLOADING ACCOUNTS (Symbol U)

U-1. Labor Unloading Coal.

This account is charged with all payments or earnings for manual labor unloading coal. The source of these charges is explained in the description of the Time Book, Form G.

U-2. Team Unloading Coal.

It may become necessary, at times, to unload coal from cars into wagons or trucks in order to haul it some little distance to the storage pile. This account is designed not only to keep track of the cost of doing such work, but to

become one of a group of keys to the distribution of certain undistributed accounts. It is necessary, of course, to get all of the cost of unloading coal into the unloading group, just as it is necessary to prevent the cost of such work from improperly finding its way into some other group. Also it is necessary to have some guide for the distribution of accounts carrying such items as feed, shoeing, veterinary, repairs on harness and wagons, taxes and depreciation on teams, etc., since these accounts cannot conveniently be distributed among the departments until the end of the fiscal period. There are corresponding expenses connected with the operation of trucks. Until the time spent by such equipment in each department is known such expenses cannot be distributed.

Teams and trucks may work in unloading coal, unloading wood, delivering coal, delivering wood, and may perform various tasks from which the earnings go to the credit of Outside Teaming and Trucking, M-6. The time of the team or truck is indicated by the time of the *driver*, or *chauffeur*; and the time of the driver and chauffeur is indicated by the balances in accounts U-2, U-3, U-5, U-6, D-1, D-2, D-3, D-4, and (except as noted below) M-6. Dividing the balance in each of these nine accounts by the sum of the nine balances gives the proportion, or key, for dividing the undistributed accounts, as is illustrated in Exhibits D and E.

The use of the nine balances to determine the distribution presupposes that the accounts have no credits and that the debits are made up entirely of the wages paid the drivers and chauffeurs. If this is not true, an allowance must be made by setting aside and ignoring all the credits and all the debits except the wages earned. Wages being equivalent to time spent working, the proportion of wages in each account is the equivalent of the time the equipment spends in each department. Outside Teaming and Trucking, M-6, being a revenue account which receives credit for the full amount charged for the use of teams and trucks when working out for hire and receiving these credits immediately after such work is done, is certain to need adjustment before its balance can be used as a distribution divisor. The other eight accounts should be kept free from all credits and from all debits except wages, (ignoring correcting entries) so that their balances may be correct divisors. At the end of the fiscal period, after determining the proportion of time spent by each class of equipment in each of the departments, it will simplify the statement of Allocation of Expenses, as shown in Exhibit E, if U-2, U-3, U-5, U-6 and M-6 be charged with their proportions and the various undistributed expenses credited, leaving undistributed the expenses connected with deliveries. The time spent by the teams and trucks unloading coal and wood and working for others is practically negligible, while the time spent delivering is the significant item. By disposing of the negligible part, the remainder of each undistributed account will be shown on the statement, and the statement will be more explanatory than would be the case if all these expenses were distributed and wiped out.

U-3. Truck Unloading Coal.

This account is to be handled for work done by the trucks in unloading coal as account U-2 is handled when the teams unload coal.

U-4. Labor Unloading Wood.

This account is to be handled for wood as account U-1 is handled for coal.

U-5. Team Unloading Wood.

This account is to be handled for wood as account U-2 is handled for coal

U-6. Truck Unloading Wood.

This account is to be handled for wood as account U 3 is handled for coal.

DELIVERY ACCOUNTS (SYMBOL D)

D-1. Labor Delivering Coal by Teams.

In explaining the Daily Time Ticket, Form H, it is shown that the workman separates his time into the different departments or kinds of work he does during the day. All the labor performed in delivering coal by teams is entered in column G of the Time Book, and, at the end of the month, account D-1 is charged with all that was earned by all of the men who worked in Department G. The result is that, at the end of the cost finding period, this account will show the total for the fiscal period paid for man labor in delivering coal by team.

D-2. Labor Delivering Wood by Teams.

This account is built up for wood the same as account D-1 is built up for coal.

D-3. Labor Delivering Coal by Trucks.

This account is built up for trucks the same as account D-2 is built up for teams.

D-4. Labor Delivering Wood by Trucks.

This account is built up for trucks the same as account D-2 is built up for teams.

D-5. Coal Delivered by Hired Equipment.

It is considered good practice for the dealer to own and operate delivery equipment sufficient only for handling the average tonnage; and, at busy periods, to hire teams or trucks to help during the peak times, rather than to keep equipment to handle the peak loads, and thus have some costly equipment lying idle much of the year. This account is charged therefore with all payments, or amounts earned, for delivering coal by hired equipment. Provision is made, as shown in Form F, for recording the quantity delivered by hired equipment. At the end of the cost finding period, the quantity so delivered divided into the cost of the same will give the average cost of delivering coal by hired equipment. The chief purpose of this account is to keep such cost separate from the cost of delivering by teams or trucks owned by the dealer. By separating the quantities delivered by teams, trucks and hired equipment, and knowing the total cost of each, it becomes a simple matter to determine the average cost per unit of each and also the average cost of all.

D-6. Wood Delivered by Hired Equipment.

This account is built up for wood as account D-5 is built up for coal.

D-7. Electric Wagon Loader Expense.

This account is to be used only in those yards operating an electric wagon loader. It is entered here for illustrative purpose and obviously not to create the idea that it should be used in yards not having such equipment. This account is self-explanatory and is charged with the cost of current repairs and all expenses in connection therewith except depreciation which should be charged into account D-8.

D-8. Depreciation on Wagon Loader.

For cost finding purposes, depreciation, being an expense item, might properly be charged into some expense account, for example D-7, but as the Income Tax Return requires a separate statement for all depreciation charged for the year, it is believed best to keep all depreciation items in separate accounts, as shown in Exhibit B. Exhibit B will show the determination of the amount to charge into this account and that the total of the various depreciation charges is to be credited to Reserve for Depreciation, A-20.

D-9. Feed, Shoeing and Barn Expense.

This account is to be charged with the cost of all feed, horse-shoeing, veterinary and other expenses connected with the maintenance of teams, wagons and harness which do not belong in accounts D-10, D-11, D-12 and D-13. Labor working in the barn caring for the horses and cleaning the barn should be reported on the Daily Time Ticket as Labor Caring for Teams, and when the pay roll is distributed such labor should be charged to this account, D-9, and not to accounts D-1 or D-2. The reason for this is that although such labor is probably a delivery charge, being connected with the teams and the teams being used chiefly for delivery, it must be divided between delivering coal and wood (accounts D-1 and D-2) and accounts U-2, U-5 and M-6 in the true proportion, and this proportion can best be determined in the office at the end of the cost finding period rather than by permitting the workman himself to undertake the division each day. The driver, spending an hour in the barn, may know that he spent an hour, but he ought not to be required to proportion that hour between accounts U-2, U-5, D-1, D-2 and M-6. At inventory time, the amount of feed and team supplies on hand is credited in red ink to this account D-9, and, after the closing entries are made, the amount of the inventory is brought down as a new debit balance. But as explained in description of account A-9, this debit balance is shown on the financial statement under Operating Supplies, A-9, as an asset and not in D-9 among the delivery expenses, since it is an unconsumed expense.

D-10. Repairs on Wagons and Harness.

This account is so self-explanatory that it is hardly necessary to say that all repairs on wagons and harness should be charged to it. The reason for keeping it as an expense account by itself is that the Income Tax Return requires a separate statement for repairs and, like depreciation, there is no use in losing an item in some expense account when it is known that it will have to be separated ultimately and shown as an individual item.

D-11. Miscellaneous Team Expense.

This account is sufficiently self-explanatory if we add that it should be charged with any expense connected with the teams, wagons or harness which cannot properly be charged into accounts D-9, D-10, D-12 and D-13.

D-12. Taxes on Teams, Wagons, Harness and Team Supplies.

For cost finding uses alone, it would eliminate a ledger account to charge such taxes into account D-11, but as the Income Tax Return requires a separate statement for taxes, it is believed best to keep such items separate rather than lose them in a general account.

D-13. Depreciation on Teams, Wagons and Harness.

The method for finding depreciation is shown in Exhibit B. This item of expense for cost finding purposes alone could very properly be charged into account D-11 were it not that the Income Tax Return requires a separate statement.

D-14. Gasoline, Oil, Tires and Truck Supplies.

This account is to be charged with all such supplies bought through the period. At inventory time, the amount of such supplies on hand is to be credited in red ink to this account, and, after the closing entries are made, the amount of the inventory is to be brought down as a new debit balance. This inventory balance, while remaining in this account, is shown on the financial statement, Exhibit I, under account A-9 for the reason given in explanation of account D-9. This account may further be divided if the dealer so desires: for example, some dealers may want to know the exact amount paid for tires or gasoline.

D-15. Repairs on Trucks.

This account is to be charged with all repair items incurred on trucks during the period, and, as explained under account D-10, a separate account is kept partly for Income Tax purposes and partly because it is wise to know the cost of repairing trucks.

D-16. Miscellaneous Truck Expense.

There are expense items such as license fees and liability insurance on trucks which must be charged among delivery accounts and yet which cannot properly be charged into accounts D-14, D-15, D-17 and D-18. Such items should be charged to this account.

D-17. Taxes on Trucks and Truck Supplies.

This account is handled for trucks as D-12 is handled for teams.

D-18. Depreciation on Trucks.

This account is handled for trucks as account D-13 is handled for teams.

D-19. Miscellaneous Delivery Expense.

Items of expense connected with delivery are incurred which properly cannot be charged directly to any other of the delivery expense group, and yet belong in the general delivery group. This account is designed to hold such expenses.

D-20. Depreciation on Small Tools.

Exhibit B shows the method of determining depreciation and making the book entries, and assuming that substantially all of the small tools used around a fuel yard are used in the delivery department, the depreciation on small tools is placed in the general delivery group and it is kept separate for Income Tax purposes.

YARD ACCOUNTS (SYMBOL Y)

Y-1. Labor in Yard.

Labor in and about the yard connected with the handling of coal and wood, or other material for sale, which is not an unloading or delivery task

should be charged to this account; but labor repairing buildings or pavement about the yard should be charged to account M-3. Labor in yard, like unloading expenses and delivery expenses, as well as overhead expenses, enters into the cost of operation. But where rent is paid for the use of property and the landlord pays the cost of keeping it in repair, it is obvious that the landlord's expenses never occur among the expenses of the dealer. In like manner, when for cost finding purposes the dealer charges account O-1 with rent on property which he himself owns, so as to get the rent charge among his expenses and thus puts himself on an equality with his neighbor who rents from an outsider, he must not inflate his expenses by charging repairs, depreciation, or taxes on real estate for which he is receiving rent, into the expense groups which enter into his costs of operation. Such charges must be entered among the Miscellaneous Accounts, symbol M, which is an outside group and not connected with operating costs.

Y-2. Demurrage.

One might assume that demurrage charges on coal should be charged to some expense account in the coal group and demurrage charges on wood to some corresponding account in the wood group, but this is hardly fair. If a car of coal and a car of wood are in the yard at the same time it is not fair because the coal was unloaded first and the wood last to charge wood because the wood happened to be last. It is believed to be correct to apportion demurrage charges, even if such charges be inconsiderable, between coal and wood in the proportion that the units of each, run through the yard, bear to each other.

Y-3. Miscellaneous Yard Expense.

This account is designed to hold proper charges of expenses incurred in the yard other than labor.

OVERHEAD ACCOUNTS (SYMBOL O)

O-1. Rent.

Rent in this case means rent of land and buildings or some other real estate such as a private spur track. The rental on such equipment as teams or trucks should be charged into some delivery expense such as Miscellaneous Team Expense or Miscellaneous Truck Expense and not to the overhead account of Rent, nor should the hiring of such delivery equipment be charged to accounts D-5 or D-6, for these accounts are intended to hold charges where the dealer hires a team and driver, or a truck and chauffeur, by the ton, cord, load, day or hour. When a dealer rents a piece of land equipped with the necessary buildings and side track to operate a fuel yard whatever rental he pays should be charged to this account. If the rent be prepaid, however, the charge in such case should be to A-11 and not to O-1. If some neighboring dealer owns his land, buildings and track, it could not be termed uniform accounting to have one show a heavy expense item for rent and the other show nothing for rent. To put them on an equality, it is necessary for the one who owns such property to determine as nearly as possible what he would have to pay for the use of such property if it belonged to another and then charge account O-1 (see explanation of A-11) and credit account M-2 with such amount. If an artificial condition has been created whereby the dealer is both landlord and tenant, and since account O-1 is a tenant account and account

M-2 is a landlord account the dealer should be careful that all taxes, depreciation, repairs and other charges against the land and buildings are excluded from the overhead group of expenses and scrupulously charged into some of the outside expense accounts included under Symbol M. The expense of conducting the business is just the same whether the dealer's money is invested in the real estate or the dealer pays the rental to some other man. To omit a proper charge for this expense is to omit a necessary part of the expense of conducting business.

O-2. Interest Paid.

Charge this account with all accrued interest at the close of the period and all interest paid during the period on obligations connected with the business which do not represent loans on real estate. For, as was explained under rent, if the expense accounts are charged with rent on real estate when the dealer owns the property, it would be a double charge to charge interest on real estate loans on property for which rent is charged. Such interest should be charged to account M-2.

O-3. Interest on Investment Other Than Real Estate.

If it is proper to make a charge under the name of rent (see account O-1) for the money invested in real estate, it follows that it is proper to make a charge for the remainder of the investment. Deduct the sum of the property on which rent is charged and the liabilities from the total assets, and the remainder will represent the investment other than real estate. Account O-3 should be charged and account M-2 should be credited with the interest on this investment, not at the interest rate on which short time loans are secured, but preferably at the low rate of interest at which money is borrowed on good security for a long term of years.

O-4. Salaries.

The reasoning used in the explanation of accounts O-1 and O-3 whereby rent and interest should be charged on the net investment applies to salaries. If, in two competing businesses, the manager of one is employed by the owner and receives a salary and in the other business the proprietor acts as his own manager, the cost of doing business can be compared more accurately by treating both concerns in the same way and charging salaries account for the services of the manager-owner the same amount as though he were an employee. The United States Fuel Administrator for the State of Washington, recognized this principle and established the salary rate at 50 cents per ton of coal and 50 cents per half-cord of wood on the sales of coal and wood which went through the yard. This salary should not be applied to carlot sales of coal and wood. Ordinarily, when the retail dealer sells carlots, he is merely accommodating some other dealer who will return the accommodation. There is practically no expense connected with this sale, and, therefore, the salaries account should not be increased without some corresponding increase in the expenses. In cases where the retailer engages in a jobbing business for profit it is recommended that his wholesale and retail business be kept separate. A just proportion of the expenses should be taken out of the retail group and put into the wholesale group (the wholesale department then being entitled to whatever profit it might make) and thus not mix wholesale and retail expenses and profits to the confusion of both. This account is a debit account, the corresponding credit account is L-8, for the proprietor's salary, while the employee's personal account should receive credit for salaries earned by others than the proprietor.

O-5. Office Supplies and Expense.

Charge this account with all stationery, account books, stamps, light, water, fuel, etc. used in the office. The inventory belonging to this account should be shown on the financial statement under A-9 as explained in the description of accounts D-9 and D-14.

O-6. Trade Associations Expense.

It is not infrequently the case that fuel dealers belong to one or more trade associations which are helpful to the business and the expense of such associations is a proper charge against the business.

O-7. Maintenance of Office Automobile.

When an automobile is used exclusively for the business, or if not used exclusively where the expense account is charged only with its true proportion of expense incurred for the business, this is a proper account. All expenses connected with the office automobile should be charged to this account except repairs, taxes and depreciation, which for Income Tax purposes, are best charged into accounts O-10, O-11 and O-12. The inventory belonging to this account should be shown on the financial statement under A-9 as explained in accounts D-9 and D-14.

O-8. Losses from Bad Debts.

The manager should determine from the experience of previous years what percentage of the accounts receivable is likely to prove uncollectable, and, at the close of the cost finding period, this amount should be charged to O-8 and credited to A-4. When a personal account proves uncollectable, account A-4 should be charged and the personal account credited.

O-9. Miscellaneous Overhead Expense.

This account is designed to hold any overhead expenses which cannot properly be placed in some other account under symbol O.

O-10. Repairs on Office Furniture and Automobile.

This account is self-explanatory.

O-11. Taxes on Coal, Wood, Office Furniture and Automobile.

This account is self-explanatory.

O-12. Depreciation on Office Furniture and Automobile.

This account is self-explanatory.

O-13. Profit and Loss from Trading.

At the close of the cost finding period, this account receives the closing entries from all nominal accounts *not included under symbol M*, and when completed this account is closed into Proprietor's Drawing Account, L-9, if a partnership, or closed into Surplus if a corporation.

MISCELLANEOUS ACCOUNTS, (SYMBOL M)

Note: Symbol M accounts do not enter into cost determination and are sometimes termed "Outside" accounts.

M-1. Cash Discounts.

Credit this account with any discounts taken on merchandise purchases, and at the end of the fiscal period close this account, as well as other symbol M accounts, into L-9 if a partnership or into Surplus if a corporation.

M-2. Rentals and Interest Earned.

Under account O-1 it is explained that rent is a proper charge against overhead expenses whether the property rented belongs to the proprietor of the business or to an outsider: if to an outsider, the credit of rent should be to the personal account with the outsider; but if to the owner of the business account M-2 is the account to credit. Account M-2 is the credit account corresponding to account O-1, a debit account. The same rules apply to interest earned and this account, M-2, should receive the credits from O-3. This account should be charged with all interest paid on real estate mortgages.

M-3. Repairs on Buildings and Yard Equipment.

The title to this account explains what items belong here, and it is placed among the symbol M accounts for the reason assigned in describing Rent, O-1, that is, when rent is charged on property belonging to the dealer it is not proper to charge among the cost accounts repairs, taxes, depreciation and other expenses which would be borne by another if the property belonged to an outsider. A separate account is kept with repairs because the Income Tax accounting requires a separate statement of repair expenditures.

M-4. Taxes on Land, Buildings and Yard Equipment.

This account is self-explanatory and is governed by the principles explained in M-3.

M-5. Depreciation on Buildings and Yard Equipment.

This account is self-explanatory and is governed by the principles explained in M-3.

M-6. Outside Teaming and Trucking.

It frequently happens in the summer and at other dull times that the dealer can earn a few dollars by hauling for others or using his teams in plowing gardens or digging basements. It is economical to do this rather than let such equipment stand idle. It is obvious that whatever amount is earned by this work is a charge against the party for whom such work is done, and that this account, M-6, should receive credit for the amount earned. At the end of the cost finding period, this account should be carefully charged with its just proportion of the expense of maintaining the teams and trucks which perform service for other people. And monthly, when the pay roll is distributed, this account should be charged with any labor performed in driving or working with teams or trucks used for others. In fact, the distribution of the pay roll shown in this account is the key which determines the proportion of the whole expense for teams and trucks which should be charged to M-6.

M-7. Miscellaneous Outside Income.

All the accounts under symbol M may be classed as outside accounts, that is, accounts not logically connected with cost determination. They constitute an arbitrary separation, for under this cost finding plan only those nominal accounts directly connected with the expenses of trading go into the cost; and

expenses connected with other earnings which by chance or necessity appear and are not strictly the result of the trading operations of the business are kept separate. In this case this separation is grouped under symbol M. Miscellaneous Outside Income is intended to hold such outside income or expenditure as cannot properly be placed in some one of the other symbol M accounts. At the end of the period, all of the accounts under symbol M should be closed into Proprietor's Drawing Account, L-9, and not into account O-13, for Profit and Loss from Trading should be reserved to show only the net results from trading. When account O-13 and all the symbol M accounts are closed into Proprietor's Drawing Account, the latter, before being closed into Proprietor's Capital Account, L-7, will show how the proprietor's withdrawals correspond with the net earnings from all sources. In the case of a corporation, all the symbol M accounts and the Profit and Loss from Trading should be closed into Surplus.

EXPLANATION OF FORMS FOR AUXILIARY BOOKS

FORM A.

Carlot Purchase Register.

Form A is designed to record all carlot purchases of merchandise bought for sale. A carload of feed, or other material, bought for consumption should not be entered on the Carlot Purchase Register. If the business handles other commodities than coal or wood, the Carlot Purchase Register should be arranged with additional columns to record properly the extra commodities. The Amount of Invoice column (coal and wood being kept in separate columns) should show the total amount of the invoice regardless of whether the amount be simply the cost of the material at originating point or it be made up of such cost plus any freight or switching prepaid by the shipper and shown on the invoice. The second group of columns, Freight Paid by Us, records, not necessarily the freight on the material, but the freight paid by the dealer himself. In other words, transportation charges prepaid by the shipper should not be shown in the freight column at all but should be shown either in the invoice column if the charge appear on the original invoice, or it should be credited to the shipper on the Journal and charged either to Coal Stock, A-5, or Wood Stock, A-7, as the case may be. In case a purchase of coal or wood is made on the basis of a delivered price, (that is, the shipper is to bear the transportation charges and is to take credit for it on the invoice) and the shipper allows the freight charges to follow and be paid at destination, the freight, although paid by the consignee, should be handled through the Cash Book by charging the shipper with the payment and it should appear neither as freight on the Carlot Register nor on either of the freight accounts A-6 or A-8 in the Ledger.

The headings of the various columns on the Carlot Purchase Register are self-explanatory, very necessary, and should be filled out properly for every car. The invoice amounts are to be posted directly to the credit of the party from whom bought, and the totals are to be posted to the debit of Coal Stock, A-5, or Wood Stock, A-7, as the case may be. But again, let it be noted, the totals of the freight columns are not to be posted in as much as the two freight accounts are built up entirely from entries on the Cash Book or Journal and the footings of the freight columns on the Carlot Purchase Register are to be used merely as proof to check the correctness of the ledger account and to prevent freight bills being paid twice. The Car Record columns are designed to keep the demurrage records. At the end of each month, the Carlot Purchase Register is to be recapitulated by tabulating the quantity and cost of each kind of material bought in carload lots and entering the summary of each, both quantity and cost, in the summary squares at the bottom of Form A; these summaries then being entered in corresponding columns on Form C. It is important to note that cost in this case is the sum of the invoice and all freight regardless of whether the freight charge is shown in the freight columns or paid by the shipper, or any other person, and credited through the Journal. For example, suppose there be in the month of January five cars of Roslyn Mine Run coal bought. The proper procedure is to find the total number of pounds of this kind and grade of coal and enter it in the pounds column of the proper square on Form A. Then find the sum of the invoices and the freight

paid and any freight charged elsewhere for this kind of coal and enter this sum in the cost column on Form A, and in like manner for all the different kinds of coal and wood bought through the month so that the horizontal month line on Form C will record the total pounds of coal and the total cords of wood with the total cost of each.

FORM B.

Register of Purchases from Other Retailers.

A separate record must be kept for coal and wood purchases from other retailers and for the purchases of these commodities in carlots. The latter is bought at true prime cost while the purchases from other retailers are bought at a higher price than the prime cost and it is necessary to keep these records separate so that at the end of the cost finding period the excess cost paid other retailers may be eliminated and all purchases from whatever source reduced to the true prime cost. Form B is self-explanatory. At the end of the month it is recapitulated in substance as the Carlot Purchase Register is recapitulated, and the totals of Form B are entered in the proper column on Form D.

FORM C.

Recapitulation of Carlot Purchases for Year-----

and

FORM D.

Recapitulation of Purchases from Other Retailers for Year-----,

As already explained, these forms accumulate monthly in separate columns for each kind of coal or wood (in pounds of coal and cords of wood) the quantities and costs of the merchandise purchases. It is obvious that the totals for the year will show the total quantity and the total cost of each commodity bought for sale. The total quantity reduced to the normal units, tons of coal and cords of wood, divided into the total cost of each will give the average cost of each. This statement gives the true average prime cost for the carlot purchases but not the prime cost for purchases from other retailers. For example, let us suppose the Carlot Purchase Register shows that the average prime cost of South Prairie Mixed Steam for the year was \$6.08, and that for the same period, the average price on this kind and grade of coal bought from other retailers was \$7.10 per ton. It is obvious therefore that the excess cost on South Prairie Mixed Steam bought from other dealers was \$1.02, and this excess of \$1.02 multiplied by the number of tons bought from other retailers would give the excess cost on this particular kind of coal. Computing the quantity of each kind of material bought from other retailers by the prime cost will give the amount such material would have cost if bought in carlots and deducting such amount from the amount paid other retailers will give the excess paid. A journal entry should then be made charging Excess Cost of Coal Bought from Other Retailers, G-9, with the excess cost of all the various kinds of coal and crediting this amount to Coal Stock, A-5. A similar entry is then made charging G-20 with the excess cost of wood and crediting A-7. The result of this, it is apparent, leaves Coal Stock and Wood Stock the same as though all coal and wood had been bought in carlots. The statistics accumulated in Forms C and D are used in various ways which will be understood easily by reference to the several exhibits.

FORM E.

Sales Sheet.

This form is the daily work sheet constituting the auxiliary Journal or book of original entry for all sales, except carlot, as well as the statistical basis for all materials sold at retail and its columns are self-explanatory. Four of these sheets are in use simultaneously: the first being marked Sold Delivered by Teams; the second, Sold Delivered by Trucks; the third, Sold Delivered by Hired Equipment; and the fourth, Sold at Yard. By using these four sheets the four kinds of sales are separated automatically and the totals may be entered quickly on Form F, the coal and wood being kept separate on each sheet. The eight separations, being four kinds of sales of coal and four of wood distributed as to method of delivery, are made with more ease by using four sheets at once than if but one sales sheet be used at a time and the segregations made from this one sheet. The main purpose of the segregations described above is to facilitate the recapitulation shown on Form F and is explained more in detail in the description of Form F. All charge sales are to be posted directly from the Sales Sheets to the debit of the purchaser. The totals of the charge columns may either be posted directly to the credit of the proper sales accounts G-1, G-5, G-10, or G-15 or, even better, recapitulate the totals of all the charge columns on Form F, and then make one posting for the month of the total amounts from the charge sales columns on Form F. The totals of the cash sales columns can best be disposed of as soon as the Sales Sheet is complete by making a Cash Book entry crediting the proper sales accounts, G-1 G-5, G-10, G-15. The packing columns constitute the pay roll columns for the packers since the best place to keep record of the packers' work is in connection with the complete history of the sale or delivery which the packer handles. If kept in another place, either some kind of an index must be devised or else it would be difficult, if not impossible, to reproduce data in case of dispute with the packer unless an entirely new or duplicate record be kept, a method which is always inadvisable. The packing columns on the Sales Sheet are merely memoranda columns and it is not considered useful to keep the statistics of the number of tons packed since only the money paid or earned for packing is required among the statistics.

There are two recapitulations to be made from the Sales Sheet; the first is the recapitulation shown on Form F to which reference has already been made; and the second one, now to be described, should have its description prefaced with the remark that this recapitulation may be made or not as the dealer may desire. It is the most laborious of all the various methods used in this cost finding system and is the one which experience has shown is the most fruitful of errors. Because of the labor and of the chance for error involved in its calculation a substitute method much shorter has been designed which will be described later. To assist in the calculation of the more complicated recapitulation, now under discussion, there are a series of summary squares at the bottom of the Sales Sheet, Form E, a space being provided in the top of each square for the name of the kind of coal or wood and unit columns being provided in the bottom of each square for recording the pounds of coal or cords of wood. Each Sales Sheet, when using this recapitulation, should be worked over and the total quantity of each kind of material sold should be determined and entered in its proper summary square. This being done, another sheet should be provided which may be any stock form, as illustrated in Form K, containing a sufficient number of perpendicular columns with unit lines. The

various items in the summary squares of the Sales Sheets are then transferred to the corresponding columns on Form K, one horizontal line on Form K being used to record all the summaries of one Sales Sheet, this horizontal line being preceded by the number of the Sales Sheet. It is obvious that the total of each column on Form K for the fiscal period will give the total amount of each commodity sold during the period.

The information furnished by this recapitulation is indispensable in building up the accounts, Degradation and Loss on Coal, S-1, and Shrinkage and Loss on Wood, S-2. The dealer knows from his inventory how many tons of each kind of coal and how many cords of each kind of wood he had at the beginning of the fiscal period and also knows from Forms C and D the cost and number of pounds of each kind of coal and the cost and number of cords of each kind of wood he purchased during the fiscal period. The sum of the inventory and the purchases of each kind of material will show the total amount of that kind of material to be accounted for. The recapitulation of sales on Form K plus the inventory at the close of the period will give the amount of each kind of material accounted for. The difference between the amount to account for and the amount accounted for represents the loss or gain in quantity for the period for that particular kind. Knowing the average prime cost, it is a simple computation to reduce to dollars and cents the loss or gain on each kind of material handled. The difference between the sum of the losses and the sum of the gains will represent degradation and loss on coal and the shrinkage and loss on wood: loss in these cases being the actual physical loss or disappearance in quantity; and degradation being a decline in value when higher grade lump or nut coal is broken up into fine coal. In the latter case, even though there is no loss in quantity, there is degradation in value. Degradation and loss accounts furnish valuable information, for if two yards show different results in these accounts, S-1 and S-2, such information will lead the dealers to inquire why there is a greater loss in one yard than in another, and will tend to point out why the inferior yard is destroying good material when more careful work would prevent such destruction.

We have said that this particular statistical work is the most laborious of all and the most liable to error, and while it is better theoretically that the dealer follow this method rather than the short one about to be described, yet if he cannot, or will not, take the necessary time to do this work, the short method should be pursued, for it will answer every purpose except that degradation and loss accounts cannot be kept and the gross margin will contain the error of degradation and loss (whatever that error may be) and another small error later to be described. The question is whether or not accuracy as to the gross margin and knowledge as to the degradation and loss are considered of sufficient importance to warrant the dealer in incurring the labor of the longer method. Before the gross margin can be found, the cost of coal or wood must be found, and this cost must be found either by the statistical long method or by the short method of finding it from the coal stock or wood stock accounts.

The short method consists in determining from Coal Stock, A-5, or Wood Stock, A-7, the cost of coal, or wood, without the statistical information furnished from Form K. Coal alone will be described, the cost of wood being found in a similar way. Coal Stock, A-5, is built up as follows: the debit side shows the inventory at the beginning of the fiscal period, the purchases in carload lots, the purchases from other retailers and the freight; the credit side shows the excess cost paid other retailers (see explanation of G-9) and the inventory at the close of the period (in red ink). The debit balance will now show the total

cost of coal sold which must be distributed into the three accounts, G-4, G-5 and G-8. Recognizing and ignoring the error of omitting degradation and loss, the cost of coal to be charged into accounts G-4, G-6 and G-8 will be found by the following method. The record of carlot sales of coal, kept on Form F, shows the invoice number, which is the combination of page number and line number on the Carlot Purchase Register, and will enable the dealer to find quickly and summarize the cost of the small number of cars any retailer is likely to sell during the fiscal period. When this amount is charged to account G-8 and credited to Coal Stock, A-5, the balance in A-5 will then represent the amount to be distributed between accounts G-4 and G-6 and before such distribution can be made accounts G-4 and G-6 must be reduced to a common denominator.

There is usually an arbitrary differential between the price of a ton of coal sold at the yard and sold delivered. This arbitrary differential may be the cost of delivery or it may be a purely arbitrary figure. For example, in Seattle the dealers located in Zone G make a difference between the price of a ton of coal sold at the yard and the price of a single ton shoveled off in Zone G of \$2.20, and in other towns the dealers, of course, will know the corresponding difference between the price at the yard and the delivered price, and this difference is the amount alluded to under the expression "arbitrary differential." By the expression "reduced to a common denominator" is meant either to eliminate this arbitrary differential from the coal sales delivered or to add it to the coal sales at yard. Multiplying the number of tons in either account by this arbitrary differential will give the amount to deduct in the one case or to add in the other. When so reduced to a common denominator, the ratio which the balance in each account bears to the other, when so reduced, marks the ratio for dividing the cost remainder in coal stock between accounts G-4 and G-6.

The gross margin per unit means the difference between the selling price and the prime cost, and this is found by deducting the total prime cost of coal sold delivered, or at the yard, from the total sales delivered, or at the yard, after eliminating certain necessary items as packing and sales allowances, G-2 and G-3, and then dividing the remainder by the number of tons sold delivered or at the yard, as the case may be. When the cost of the coal sold in each of these accounts is found by the statistical or long method, using Form K, then the gross margin per unit is the true average gross margin. But when the short form is used the result not only contains the error of omitting degradation and loss but also the other error which comes from dividing the cost of coal sold (as determined by the balance in coal stock) into two accounts by proportion after reducing them to a common denominator. This last error is occasioned by the assumption that the proportion of sales of high priced coal and low priced coal is the same in coal sold delivered and coal sold at the yard, which may not be true.

As pointed out in the description of account L-8, the 30 cents per ton profit allowed by the United States Fuel Administrator in Seattle meant 30 cents added to the sum of the prime cost and the operating cost to determine the selling price of a single ton shoveled off in the *basic* zone. When two or more tons were sold in the basic zone the price was 25 cents per ton less, thus allowing only 5 cents per ton profit. This, however was equalized by allowing a profit of 65 cents per ton in the next zone, and 80 cents per ton in the next and with corresponding increases in the succeeding zones. Hence, the average net profit must not be confounded with the 30 cents allowance of the Fuel Administrator.

FORM F.

Recapitulation of Deliveries and Charges from Sales
Sheets and of Carlot Sales.

It is believed that the columns on this recapitulation sheet are sufficiently explanatory. The four Sales Sheets are used simultaneously in order to keep separate from the beginning the four kinds of sales for each commodity, and quantity columns are provided on the recapitulation sheet for preserving the totals of these separations. The money values of the various sales, however, are not separated in the same way as the quantities are separated, but only into sales in carlots, at yard, or delivered. So far as the value of coal sales delivered is concerned, it is immaterial whether the deliveries be made by teams, trucks, or hired equipment. But it is important that the quantity delivered by each kind of equipment be known as the deliveries by each constitute a divisor into some of the expense groups. It is not deemed necessary to recapitulate the cash sales since it is easier to dispose of the cash by entering it on the Cash Book as soon as any given Sales Sheet is completed.

FORM G.

Time Book
and

FORM H.

Daily Time Report.

Each laborer whose wage account is run through the Time Book is required to make out and turn into the office each day a time ticket showing the date, the man's name, the time worked in various departments, the total time, the time at which he began work, the time at which he quit, and the time off for noon. It is recognized that there is a chance for error here in the division of a man's time, but in view of the fact that the man has no interest in wrongly dividing his time, it is believed to be a practical and sufficiently accurate method to require the workman who knows best to state on his Daily Time Report as nearly as he can the amount of time he spends in each department. The only case where a workman would have an interest in wrongly stating the time would be to report the total as greater than it really was, but this is common to all time-keeping and will have to be checked in outside ways.

Form G is the Time Book, one whole page of which is devoted to one workman and the given workman's Daily Time Report is posted to his page on the Time Book on the proper date line and in the proper perpendicular column corresponding to the departments in which he worked. Extra department columns are provided on the Time Book. When the wage arrangement requires extra pay for over-time work the time separation must be made only in the total columns and no attempt should be made to separate over-time from straight-time in the department columns. For example, suppose a man works ten hours in one day in several departments, when the straight-time time is nine hours, the full ten hours should be distributed properly through the various department columns indicated by letters at the top and the only place where a separation should be shown is that nine hours should be shown in the Straight-Time column and the one hour in the Over-Time column. The Amount Earned column and the Amount Paid column constitute a very primitive ledger arrangement. Frequently workmen receive something

on account between pay days, and it is convenient to have a place where such payments will not be overlooked on pay day. This is a monthly Time Book and not infrequently men are paid every week. But it is not practical to distribute the pay roll weekly. The proper method is to compute the total time for the month earned to that pay day regardless of how many pay days have occurred in that month. This total amount entered in pencil in the Amount Earned column less the footings of all items in the Amount Paid column shows the balance due and when this amount is paid it should be entered in ink in the Amount Paid column so it can be taken into account in the footings for the next pay day. At the end of the month, of course, the total amount earned, less the total amount paid, is the balance due.

In the distribution of the Time Book it is important to remember that the actual time in each department should be entered in its proper column without regard to straight-time or over-time. Therefore, the wage rate for the different departments is neither the straight-time rate nor the over-time rate, but it is the *average* rate. The total time in the Over-Time column multiplied by the overtime rate and likewise the total time in the Straight-Time column multiplied by the straight-time rate added together will give the total amount earned, and the total amount earned divided by the sum of the over-time and straight-time will give the average time rate. The total time in each department column multiplied by the average rate will give the amount earned in each department, and, obviously, the sum of the amounts earned in all of the departments should equal the total amount earned. Having found the amounts earned in each department by each workman through the month, the recapitulation is made by putting together all the amounts earned in department A by all the men who worked in department A and likewise through all the departments. Finally, a journal entry is made charging Labor Unloading Coal, U-1, with all amounts earned in Department A, charging Team Unloading Coal, U-2, with all amounts earned in Department B and likewise through all departments crediting the total to Accrued Wages, L-5. Account L-5 will then show a credit balance equal to the unpaid balances due all the men. Labor caring for teams should be charged to account D-9, labor caring for trucks should be charged to account D-15 if it be repair-work, or to account D-16 if it be cleaning trucks. Work done by the men for which there is no department shown on the Daily Time Report should be reported on the back of the Daily Time Report and the office should determine the proper account to charge. Care must be used that labor performed outside of the business is not charged into one of the expense groups. If some labor be done for the proprietor as an individual, such item should be charged to Proprietor's Drawing Account, L-9. If work be done repairing buildings or something around the yard, it is a proper charge to account M-3, for it is outside of the business, as explained under account O-1. Rent should be charged in the monthly expense even though the proprietor owns the property, and therefore, some miscellaneous outside account like M-3 should be charged with any expense such as a landlord would have to pay if the property belonged to an outsider. In case the man was occupied driving a team or truck for others, such labor must be charged to account M-6. Drivers of teams and trucks must be cautioned against the misuse of lines A and D when making out the Daily Time Report. A and D are devoted to the time of men unloading coal or wood who are *not* at the same time driving teams or trucks. If they are in charge of teams, or trucks, such time should be entered on lines B, C, E or F, as the case may be.

FORM I.

Order Blank

A loose leaf order is far superior to a tightly bound order book, and the form shown in Form I is one in common use in a number of offices. It should be punched and used with the old fashioned Shannon arch or Y and E file. It is believed that this order blank is explanatory. After the order is filled, this blank is filed in alphabetical order, in a Y and E transfer case No. 27 which can be obtained in any stationery store.

FORM J.

Delivery Ticket.

Sales Tickets, or Delivery Tickets, are in such universal use that Form J is shown merely for illustrative purposes. They are best used in duplicate, one copy being left with the customer as an invoice and the other being signed by the customer and returned to and filed by the dealer as an acknowledgment from the customer that the delivery was properly made. It is believed better to make the original entry of sales on the Sales Sheet, Form E, and let the Delivery Ticket serve merely as an invoice and receipt rather than post to the Ledger from the office carbon copy of the Delivery Ticket and then recapitulate on a sheet corresponding to Form E. If this is not done, the recapitulations are not regularly made, tickets are allowed to accumulate, and as a result, the recapitulation work is apt never to be done. On the Delivery Ticket the space left for Register No. should be filled in with pencil, the number being made up of the combination of the page number and line number of the Sales Sheet. The Delivery Ticket signed by the customer and returned to the dealer should be filed in a Y and E transfer case No. 27 in numerical order, as shown by the register number.

FORM K.

Recapitulation of Tons and Cords Sold at Retail.

This is a simple multi-column record book such as can easily be procured in any stationery store, but to give an idea of it a sample is shown on Form K. It is for the purpose of recording in columnar form the quantity of each kind of material sold throughout the year, or other cost-finding period, in order to determine the total quantity of each kind sold during the period.

EXHIBITS

EXHIBIT A
GENERAL LEDGER ACCOUNTS SHOWING LOGICAL ARRANGEMENT

ASSET ACCOUNTS (SYMBOL A)	
A-1 Cash	A-11 Prepaid Rent
A-2 Notes Receivable	A-12 Prepaid Credit Associations
A-3 Accounts Receivable	A-13 Prepaid Commissioner
A-4 Reserve for Bad Debts x	A-14 Miscellaneous Deferred Charges
A-5 Coal Stock	A-15 Land
A-6 Freight on Coal	A-16 Buildings
A-7 Wood Stock	A-17 Yard Equipment
A-8 Freight on Wood	A-18 Movable Equipment
A-9 Operating Supplies	A-19 Office Furniture
A-10 Prepaid Insurance	A-20 Reserve for Depreciation x
x Placed among assets to insure deduction	
LIABILITY ACCOUNTS (SYMBOL L)	
L-1 Notes Payable	L-6 Mortgages Payable
L-2 Accounts Payable	L-7 Proprietor's Capital Account
L-3 Accrued Interest Payable	L-8 Accrued Salaries
L-4 Accrued Taxes	L-9 Proprietor's Drawing Account x
L-5 Accrued Wages	
x Placed among liabilities to insure deduction	
GROSS MARGIN ACCOUNTS (SYMBOL G)	
G-1 Coal Sales Delivered	G-11 Sawing Wood Sold Delivered
G-2 Packing Coal & Lineback	G-12 Packing Wood and Stacking
G-3 Sales Allowances on Coal	G-13 Sales Allowances on Wood
G-4 Cost of Coal Sold Delivered	G-14 Cost of Wood Sold Delivered
G-5 Coal Sales at Yard	G-15 Wood Sales at Yard
G-6 Cost of Coal Sold at Yard	G-16 Sawing Wood Sold at Yard
G-7 Carlot Sales of Coal	G-17 Cost of Wood Sold at Yard
G-8 Cost of Coal Sold in Carlots	G-18 Carlot Sales of Wood
G-9 Excess Cost of Coal Bought from Other Retailers	G-19 Cost of Wood Sold in Carlots
G-10 Wood Sales Delivered	G-20 Excess Cost of Wood Bought from Other Retailers
SHRINKAGE ACCOUNTS (SYMBOL S)	
S-1 Degradation & Loss on Coal	S-2 Shrinkage & Loss on Wood
UNLOADING ACCOUNTS (SYMBOL U)	
U-1 Labor Unloading Coal	U-4 Labor Unloading Wood
U-2 Team Unloading Coal	U-5 Team Unloading Wood
U-3 Truck Unloading Coal	U-6 Truck Unloading Wood
DELIVERY ACCOUNTS (SYMBOL D)	
D-1 Labor Delivering Coal by Teams	D-13 Depreciation on Teams, Wagons, and Harness
D-2 Labor Delivering Wood by Teams	D-14 Gasoline, Oil, Tires, and Truck Supplies
D-3 Labor Delivering Coal by Trucks	D-15 Repairs on Trucks
D-4 Labor Delivering Wood by Trucks	D-16 Miscellaneous Truck Expense
D-5 Coal Delivered by Hired Equipment	D-17 Taxes on Trucks, and Truck Supplies
D-6 Wood Delivered by Hired Equipment	D-18 Depreciation on Trucks
D-7 Electric Wagon Loader Expense	D-19 Miscellaneous Delivery Expense
D-8 Depreciation on Wagon Loader	D-20 Depreciation on Small Tools
D-9 Feed, Shoeing & Barn Expense	
D-10 Repairs on Wagons & Harness	
D-11 Miscellaneous Team Expense	
D-12 Taxes on Teams, Wagons, Harness and Team Supplies	
YARD ACCOUNTS (SYMBOL Y)	
Y-1 Labor in Yard	Y-3 Miscellaneous Yard Expense
Y-2 Demurrage	
OVERHEAD ACCOUNTS (SYMBOL O)	
O-1 Rent	O-9 Miscellaneous Overhead Expense
O-2 Interest Paid	O-10 Repairs on Office Furniture & Auto.
O-3 Interest on Investment other than Real Estate	O-11 Taxes on Coal, Wood, Office Furniture and Automobile
O-4 Salaries	O-12 Depreciation on Office Furniture and Automobile
O-5 Office Supplies & Expense	
O-6 Trade Associations Expense	
O-7 Maintenance of Office Automobile	
O-8 Losses from Bad Debts	O-13 Profit and Loss from Trading
MISCELLANEOUS ACCOUNTS (SYMBOL M)	
M-1 Cash Discounts	M-5 Depreciation on Buildings & Yard Equipment
M-2 Rentals and Interest Earned	M-6 Outside Teaming & Trucking
M-3 Repairs on Bldgs. and Yard Equip.	M-7 Miscellaneous Outside Income
M-4 Taxes on Land, Bldgs. & Yard Equip.	

EXHIBIT B
DEPRECIATION IN 1919

PROPERTY	Rate	Value	Full Yr.	Charged
A-16 Buildings:				
Coal Bunkers.....	20 %	629 65	125 93	125 93
Office Building.....	2 1/4 %	1922 59	48 06	48 06
Barn.....	2 1/4 %	950 67	23 77	23 77
Garage and Shop.....	2 1/4 %	94 41	2 36	2 36
Total Buildings.....		3597 32	200 12	200 12
A-17 Yard Equipment:				
Railroad.....	10 %	477 90	47 79	47 79
Fire Equipment.....	10 %	19 88	1 99	1 99
Old Wagon Scale.....	10 %	263 07	26 31	26 31
New Wagon Scale, 1/4 year.....	10 %	318 60	31 86	15 93
Total Yard Equipment.....		1079 45	107 95	92 02
A-18 Movable Equipment:				
Office Automobile.....	20 %	810 00	162 00	162 00
Truck No. 1.....	20 %	2017 45	403 49	403 49
Truck No. 2, 1/2 year.....	20 %	3507 59	701 52	233 84
Teams.....	20 %	630 00	126 00	126 00
Wagons and Harness.....	20 %	653 55	130 71	130 71
Small Tools.....	20 %	265 87	53 17	53 17
Electric Wagon Loader.....	20 %	870 40	174 08	174 08
Total Movable Equipment.....		8754 86	1750 97	1233 29
A-19 Office Furniture.....	10 %	552 42	55 24	55 24

BOOK ENTRY	Debit	Credit
D-8 Depreciation on Electric Wagon Loader.....	174 08	
D-13 Depreciation on Teams, Wagons & Harness:		
Teams.....	126 00	
Wagons & Harness.....	130 71	256 71
D-13 Depreciation on Trucks:		
Truck No. 1.....	403 49	
Truck No. 2.....	233 84	637 33
D-20 Depreciation on Small Tools.....	53 17	
O-12 Depreciation on Office Furniture and Office Automobile:		
Furniture.....	55 24	
Automobile.....	162 00	217 24
M-5 Depreciation on Buildings:		
Buildings.....	200 12	
Yard Equipment.....	92 02	292 14
A-20 To Reserve for Depreciation.....		1630 67

EXHIBIT C
STATEMENT OF WOOD AND COAL HANDLED DURING YEAR 1919

COAL	
Tons on hand at beginning.....	372.5000
" purchased in carlots.....	6665.1555
" " from other retail dealers.....	371.4000
Total tons to account for.....	7409.0555
Tons delivered by teams.....	2559.1200
" " trucks.....	3261.9140
" " hired equipment.....	490.6250
Loads sold delivered.....	6311.6590
" at yard.....	705.2200
Tons sold at retail.....	7016.8790
" in carlots.....	162.0500
" on hand at closing.....	207.3075
Total tons accounted for.....	7386.2365
Tons lost.....	22.8190

WOOD	
Loads on hand at beginning.....	333.4600
" purchased in carlots.....	1491.6000
" " from other retail dealers.....	37.0000
Total loads to account for.....	1862.0600
Loads delivered by teams.....	807.0200
" " trucks.....	204.2800
" " hired equipment.....	43.7000
Loads sold delivered.....	1055.0000
" at yard.....	163.7000
Loads sold at retail.....	1218.7000
" in carlots.....	22.0000
" on hand at closing.....	429.3400
Total loads accounted for.....	1670.0400
Loads lost (shrinkage resulting chiefly from overload).....	192.0200

EXHIBIT D
DIVISORS FOR ALLOCATION OF EXPENSE

A
Items under Divisor A were kept separate on Ledger and need no further division.

B
Divide items under Divisor B in ratio of Teamster's time delivering Coal and Wood, as indicated by wages paid as shown in Ledger accounts D-1 and D-2, as follows:

D-1 Labor Delivering Coal by Teams	\$2396.22	= 69.9%
D-2 Labor Delivering Wood by Teams	\$1031.85	= 30.1%
	<u>\$3428.07</u>	<u>100.0%</u>

C
Divide items under Divisor C in ratio of Chaffeur's time delivering Coal and Wood, as indicated by wages paid as shown in Ledger accounts D-3 and D-4 as follows:

D-3 Labor Delivering Coal by Trucks	\$2508.17	= 93.43%
D-4 Labor Delivering Wood by Trucks	\$176.37	= 6.57%
	<u>\$2684.54</u>	<u>100.00%</u>

D
Divide items under Divisor D in ratio of time delivering Coal and Wood spent by both Teamsters and Chaffeurs, as indicated by wages paid as shown in Ledger accounts D-1, D-2, D-3, and D-4, as follows:

	Coal	Wood	
Labor delivering by teams	\$2396.22	\$1031.85	\$4904.39
Labor delivering by trucks	\$2508.17	\$176.37	\$2684.54
	<u>\$4904.39</u>	<u>\$1208.22</u>	<u>\$6112.61</u>
			100.000%

E
Divide items under Divisor E in ratio of Tons of Coal and Loads of Wood sold at Retail, that is, Delivered Sales and Sales at Yard, as follows:

7016.879 Tons Coal	= 85.202%
1218.700 Loads Wood	= 14.798%
<u>8235.579</u>	<u>100.000%</u>

F
After deducting 2.86% of total Overhead Expenses, as a proper charge against Sales at Yard, the remainder is distributed in the ratio of Tons of Coal and Loads of Wood Sold Delivered, as follows:

6311.659 Tons Coal	= 85.6787%
1055.000 Loads Wood	= 14.3213%
<u>7366.659</u>	<u>100.0000%</u>

Explanation of 2.86% of Overhead Expenses charged to Sales at Yard.

The greater part of Coal and Wood Sold at Yard, as distinguished from Sales Delivered, is sold to other fuel dealers. These dealers secure the order, determine the credit standing of the customer, make the delivery, keep the account, collect the bill, lose the bad debt, guarantee the quality of the goods, incur all mishaps. Hence it is believed to be a fair estimate that four times as much overhead is connected with the sale of a unit of coal or wood delivered as when sold to the other dealers at the yard. This being assumed we make the following demonstration:

Tons Delivered	6311.659
Loads " "	1055.000
Total " "	7366.659
	$7366.659 \times 4 = 29466.636 = 97.15\%$
Tons at Yard	705.220
Loads " "	163.700
Total " "	868.920
	$868.920 \times 1 = 868.920 = 2.86\%$
Total	30355.556
	100.00%

EXHIBIT E
ALLOCATION OF EXPENSES
Year 1919

Accounts	Items	Total	Coal	Wood
Divisor A				
S-1 Degradation and Loss on Coal	424	83	424	83
S-2 Shrinkage and Loss on Wood	534	68		534 68
U-1 Labor Unloading Coal	1567	83	1567	83
U-4 Labor Unloading Wood	686	41		686 41
U-5 Team Unloading Wood	73	91		73 91
D-1 Labor Delivering Coal by Teams	2396	22	2396	22
D-2 Labor Delivering Wood by Teams	1031	85		1031 85
D-3 Labor Delivering Coal by Trucks	2508	17	2508	17
D-4 Labor Delivering Wood by Trucks	176	37		176 37
D-5 Coal Delivered by Hired Equipment	792	30	792	30
D-6 Wood Delivered by Hired Equipment	47	98		47 98
D-7 Electric Wagon Loader Expense	57	28	57	28
D-8 Depreciation on Wagon Loader	174	08	174	08
Divisor B				
D-9 Feed, Shoeing and Barn Expense	1535	53		
D-10 Repairs on Wagons and Harness	98	01		
D-12 Taxes on T. W. H. & T. Supplies	20	67		
D-13 Depreciation on T. W. & H.	256	71	1910	92
Divisor C				
D-14 Gasoline, Oil, Tires & Truck Supplies	674	31		
D-15 Repairs on Trucks	1070	37		
D-16 Miscellaneous Truck Expense	438	86		
D-17 Taxes on Trucks and Truck Supplies	32	08		
D-18 Depreciation on Trucks	637	33	2852	95
Divisor D				
D-19 Miscellaneous Delivery Expense	14	79		
D-20 Depreciation on Small Tools	53	17	67	96
Divisor E				
Y-1 Labor in Yard	611	04		
Y-2 Demurrage	22	66		
Y-3 Miscellaneous Yard Expense	4	84	638	54
Divisor F				
O-1 Rent	1140	00		
O-2 Interest Paid	311	73		
O-3 Int. on Investmt. other than Real Est.	1026	76		
O-4 Salaries	4117	79		
O-5 Office Supplies and Expense	777	11		
O-6 Trade Associations Expense	287	05		
O-7 Maintenance Office Automobile	433	43		
O-8 Losses from Bad Debts	428	03		
O-9 Miscellaneous Overhead Expense	444	70		
O-10 Repairs Office Furniture & Auto	243	68		
O-11 Taxes Coal, Wood, Furniture & Auto	60	59		
O-12 Depreciation Office Furniture & Auto	217	24		
Total Overhead	9488	11		
Less				
*2.86% charge against Sales at Yard	271	36	9216	75
Add				
*2.86% charge against Sales at Yard			25159	03
Total Expenses			271	36
			20417	32
			232	50
			4741	71
			38	86
			25430	39
			20649	82
			4780	57

*For explanation of above 2.86% see Exhibit D.

EXHIBIT D
DIVISORS FOR ALLOCATION OF EXPENSE

A				
Items under Divisor A were kept separate on Ledger and need no further division.				
B				
Divide items under Divisor B in ratio of Teamster's time delivering Coal and Wood, as indicated by wages paid as shown in Ledger accounts D-1 and D-2, as follows:				
D-1 Labor Delivering Coal by Teams	\$2396.22	=	69.9%	
D-2 Labor Delivering Wood by Teams	\$1031.85	=	30.1%	
	\$3428.07		100.0%	
C				
Divide items under Divisor C in ratio of Chaffeur's time delivering Coal and Wood, as indicated by wages paid as shown in Ledger accounts D-3 and D-4 as follows:				
D-3 Labor Delivering Coal by Trucks	\$2508.17	=	93.43%	
D-4 Labor Delivering Wood by Trucks	\$176.37	=	6.57%	
	\$2684.54		100.00%	
D				
Divide items under Divisor D in ratio of time delivering Coal and Wood spent by both Teamsters and Chaffeurs, as indicated by wages paid as shown in Ledger accounts D-1, D-2, D-3, and D-4, as follows:				
	Coal	Wood		
Labor delivering by teams	\$2396.22	\$1031.85	\$4904.39	Coal=80.234%
Labor delivering by trucks	\$2508.17	\$176.37	\$2684.54	Wood=19.766%
	\$4904.39	\$1208.22	\$6112.61	100.000%
E				
Divide items under Divisor E in ratio of Tons of Coal and Loads of Wood sold at Retail, that is, Delivered Sales and Sales at Yard, as follows:				
7016.879 Tons Coal	=	85.202%		
1218.700 Loads Wood	=	14.798%		
8235.579		100.000%		
F				
After deducting 2.86% of total Overhead Expenses, as a proper charge against Sales at Yard, the remainder is distributed in the ratio of Tons of Coal and Loads of Wood Sold Delivered, as follows:				
6311.659 Tons Coal	=	85.6787%		
1055.000 Loads Wood	=	14.3213%		
7366.659		100.0000%		
Explanation of 2.86% of Overhead Expenses charged to Sales at Yard.				
The greater part of Coal and Wood Sold at Yard, as distinguished from Sales Delivered, is sold to other fuel dealers. These dealers secure the order, determine the credit standing of the customer, make the delivery, keep the account, collect the bill, lose the bad debt, guarantee the quality of the goods, incur all mishaps. Hence it is believed to be a fair estimate that four times as much overhead is connected with the sale of a unit of coal or wood delivered as when sold to the other dealers at the yard. This being assumed we make the following demonstration:				
Tons Delivered	6311.659			
Loads " "	1055.000			
Total " "	7366.659	x 4 =	29466.636	= 97.15%
Tons at Yard	705.220			
Loads " "	163.700			
Total " "	868.920	x 1 =	868.920	= 2.86%
Total	30335.556			100.00%

EXHIBIT E
ALLOCATION OF EXPENSES
Year 1919

Accounts	Items	Total	Coal	Wood
Divisor A				
S-1 Degradation and Loss on Coal	424 83		424 83	
S-2 Shrinkage and Loss on Wood	534 68			534 68
U-1 Labor Unloading Coal	1567 83		1567 83	
U-4 Labor Unloading Wood	686 41			686 41
U-5 Team Unloading Wood	73 91			73 91
D-1 Labor Delivering Coal by Teams	2396 22		2396 22	
D-2 Labor Delivering Wood by Teams	1031 85			1031 85
D-3 Labor Delivering Coal by Trucks	2508 17		2508 17	
D-4 Labor Delivering Wood by Trucks	176 37			176 37
D-5 Coal Delivered by Hired Equipment	792 30		792 30	
D-6 Wood Delivered by Hired Equipment	47 98			47 98
D-7 Electric Wagon Loader Expense	57 28		57 28	
D-8 Depreciation on Wagon Loader	174 08		174 08	
Divisor B				
D-9 Feed, Shoeing and Barn Expense	1535 53			
D-10 Repairs on Wagons and Harness	98 01			
D-12 Taxes on T. W. H. & T. Supplies	20 67			
D-13 Depreciation on T. W. & H.	256 71	1910 92	1335 73	575 19
Divisor C				
D-14 Gasoline, Oil, Tires & Truck Supplies	674 31			
D-15 Repairs on Trucks	1070 37			
D-16 Miscellaneous Truck Expense	438 86			
D-17 Taxes on Trucks and Truck Supplies	32 08			
D-18 Depreciation on Trucks	637 33	2852 95	2665 51	187 44
Divisor D				
D-19 Miscellaneous Delivery Expense	14 79			
D-20 Depreciation on Small Tools	53 17	67 96	54 53	13 43
Divisor E				
Y-1 Labor in Yard	611 04			
Y-2 Demurrage	22 66			
Y-3 Miscellaneous Yard Expense	4 84	638 54	544 05	94 49
Divisor F				
O-1 Rent	1140 00			
O-2 Interest Paid	311 73			
O-3 Int. on Investmt. other than Real Est.	1026 76			
O-4 Salaries	4117 79			
O-5 Office Supplies and Expense	777 11			
O-6 Trade Associations Expense	287 05			
O-7 Maintenance Office Automobile	433 43			
O-8 Losses from Bad Debts	428 03			
O-9 Miscellaneous Overhead Expense	444 70			
O-10 Repairs Office Furniture & Auto	243 68			
O-11 Taxes Coal, Wood, Furniture & Auto	60 59			
O-12 Depreciation Office Furniture & Auto	217 24			
Total Overhead	9488 11			
Less				
*2.86% charge against Sales at Yard	271 36	9216 75	7896 79	1319 96
Add				
*2.86% charge against Sales at Yard		25159 03	20417 32	4741 71
Total Expenses		25430 39	20649 82	4780 57

*For explanation of above 2.86% see Exhibit D.

EXHIBIT F
COST SHEET

Year 1919

Accounts and Divisors for Coal	Total	Per Unit
Shrinkage		
S-1 Degradation and Loss on Coal 7016.879 tons sold at retail.....	424 83	060545
Unloading		
U-1 Labor Unloading Coal 6665.1555 tons purchased in carlots Less 162.0500 " sold " " 6503.1055 " unloaded	1567 83	241090
Yard		
See Exhibit E, under Divisor E. 7016.879 tons sold at retail.....	544 05	077535
Delivery		
D-1 Labor Delivering Coal by Teams..... \$2396.22 D-3 Labor Delivering Coal by Trucks..... 2508.17 D-5 Coal Delivered by Hired Equipment..... 792.30 D-7 Electric Wagon Loader Expense..... 57.28 D-8 Depreciation on Wagon Loader..... 174.08 See Exhibit E, under Divisor B..... 1335.73 " " " " C..... 2665.51 " " " " D..... 54.53		
6311.659 tons delivered.....	9983 82	1 581805
Overhead		
See Exhibit E, under Divisor F. 6311.659 tons sold delivered	7896 79	1 251143
Total Expense on Delivered Coal.....	20417 32	
COST OF HANDLING ONE TON OF DELIVERED COAL, EX- CLUSIVE OF PACKING CHARGE.....		\$3 212118
Accounts and Divisors for Wood		
Shrinkage		
S-2 Shrinkage and Loss on Wood 1218.700 Loads sold at retail.....	534 68	438730
Unloading		
U-4 Labor Unloading Wood 1491.600 Loads purchased in carlots Less 22.000 " sold " " 1469.600 " unloaded	686 41	467072
U-5 Team Unloading Wood 1469.600 Loads unloaded Less 130.000 into shed without use of Team 1339.600 Loads unloaded with Teams.....	73 91	055170
Yard		
See Exhibit E, under Divisor E. 1218.600 Loads sold at retail.....	94 49	077535
Delivery		
D-2 Labor Delivering Wood by Teams..... \$1031.85 D-4 Labor Delivering Wood by Trucks..... 176.37 D-6 Wood Delivered by Hired Equipment..... 47.98 See Exhibit E, under Divisor B..... 575.19 " " " " C..... 187.44 " " " " D..... 13.43		
1055.000 loads delivered.....	2032 26	1 926313
Overhead		
See Exhibit E, under Divisor F. 1055.000 loads delivered.....	1319 96	1 251143
Total Expense on Delivered Wood.....	4741 71	
COST OF HANDLING ONE LOAD OF DELIVERED WOOD, EX- CLUSIVE OF SAWING AND PACKING CHARGE.....		\$4 215973

EXHIBIT G
GROSS MARGINS

Year 1919

Accounts and Divisors	Items	Total	Per Unit
COAL			
G-1 Coal Sales Delivered.....	66829 14		
Less			
G-2 Packing Coal and Lineback..... \$2028.17			
G-3 Sales Allowances on Coal..... 95.02	2123 19		
Less			
G-4 Cost of Coal Sold Delivered.....	64705 95 42212 46		
GROSS MARGIN on 6311.659 tons.....		22493 49	3 56379
G-5 Coal Sales at Yard.....	6021 14		
Less			
G-6 Cost of Coal Sold at Yard.....	5299 69		
GROSS MARGIN on 705.22 tons.....		721 45	1 02301
G-7 Carlot Sales of Coal.....	600 79		
Less			
G-8 Cost of Coal Sold in Carlots.....	600 79		
GROSS MARGIN on 162.05 tons.....			
Less			
G-9 Excess Cost of Coal from Other Retailers.....	23214 94 528 98		
TOTAL GROSS MARGIN on 7016.879 tons.....		22685 96	
WOOD			
G-10 Wood Sales Delivered.....	6272 80		
Less			
G-11 Sawing Wood Sold Delivered..... \$377.99			
G-12 Packing Wood and Stacking..... 46.78	441 54		
G-13 Sales Allowances on Wood..... 16.77			
Less			
G-14 Cost of Wood Sold Delivered.....	5831 26 2165 43		
GROSS MARGIN on 1055 loads.....		3665 83	3 47472
G-15 Wood Sales at Yard..... 764.04			
Less			
G-16 Sawing Wood Sold at Yard..... 58.65	705 39		
Less			
G-17 Cost of Wood Sold at Yard.....	395 33		
GROSS MARGIN on 163.7 loads.....		310 06	1 89407
G-18 Carlot Sales of Wood.....	47 30		
Less			
G-19 Cost of Wood Sold in Carlots.....	47 30		
GROSS MARGIN on 22.00 loads.....			
Less			
G-20 Excess Cost of Wood from Other Retailers.....	3975 89 67 51		
TOTAL GROSS MARGIN on 1218.7 loads.....		3908 38	
RECAPITULATION			
Gross Margin on COAL.....	22685 96		
Gross Margin on WOOD.....	3908 38		
Total Gross Margins.....	26594 34		
Less			
Total Expenses.....	25430 39		
NET PROFIT FROM TRADING in 1919.....		1163 95	

EXHIBIT H
PROFIT AND LOSS STATEMENT
 For year 1919

COAL						Per Ct.	Per Ct.
Sales							
G-1 Coal Sales Delivered.....			66829	14			
Less							
G-2 Packing Coal and Lineback....	2028	17					
G-3 Sales Allowances on Coal.....	95	02	2123	19			
Net Coal Sales Delivered.....			64705	95			
G-5 Coal Sales at Yard.....			6021	14			
G-7 Carlot Sales of Coal.....			600	79			
Total Coal Sales.....			71327	88		100.000	
Costs							
G-4 Cost of Coal Sold Delivered....	42212	46					
G-6 Cost of Coal Sold at Yard.....	5299	69					
G-8 Cost of Coal Sold in Carlots....	600	79					
G-9 Excess Cost of Coal Bought from Other Retailers.....	528	98					
Total Cost of Coal Sold.....			48641	92		68.194	
GROSS PROFIT from trading in Coal.....			22685	96		31.806	
Expenses							
S-1 Degradation & Loss on Coal....	424	83				596	
Unloading Coal.....	1567	83				2,198	
Yardage on Coal (See Exbt. F).....	544	05				762	
Delivery on Coal (See Exbt. F).....	9983	82				13,988	
Overhead on Delivered Coal (See Exhibit E) \$7896.79							
Overhead on Coal Sold at Yard (See Exhibit E) 232.50	8129	29				11,397	
Total Expense on Coal Sold..			20649	82		28,951	
NET PROFIT from trading in Coal.....					2036	14	2,855
WOOD							
Sales							
G-10 Wood Sales Delivered.....			6272	80			
Less							
G-11 Sawing Wood Sold Delivered...	377	99					
G-12 Packing Wood & Stacking.....	46	78					
G-13 Sales Allowances on Wood.....	16	17	441	54			
Net Wood Sales Delivered.....			5831	26			
G-15 Wood Sales at Yard.....	764	04					
Less							
G-16 Sawing Wood Sold at Yard.....	58	65	705	39			
G-18 Carlot Sales of Wood.....			47	30			
Total Wood Sales.....			6583	95		100.000	
Costs							
G-14 Cost of Wood Sold Delivered...	2165	43					
G-17 Cost of Wood Sold at Yard.....	395	33					
G-19 Cost of Wood Sold in Carlots....	47	30					
G-20 Excess Cost of Wood Bought from Other Retailers.....	67	51					
Total Cost of Wood Sold.....			2675	57		40.637	
GROSS PROFIT from trading in Wood (Carried Forward)...			3908	38		59.363	

PROFIT AND LOSS STATEMENT—(Continued)

Brought Forward			3908	38			59.363
Expenses							
S-2 Shrinkage & Loss on Wood....	534	68				8.121	
Unloading Wood—							
Man labor	\$686.41						
Team labor	73.91	760	32			11.548	
Yardage on Wood (See Ex- hibit F)	94	49				1.435	
Delivery on Wood (See Ex- hibit F)	2032	25				30.869	
Overhead on Delivered Wood (See Exhibit E)	\$1319.96						
Overhead on Wood Sold at Yard (See Exhibit E)	38.86	1358	82			20.637	
Total Expenses on Wood Sold			4780	57		72.610	
NET LOSS from trading in Wood					872	19	13.247
NET PROFIT from trading in both Coal and Wood.....					1163	95	==
INCOME FROM OTHER SOURCES							
M-1 Cash Discounts			45	10			
M-2 Rentals and Interest Earned....	1080	00					
Less							
M-3 Repairs on Buildings & Yard Equipment.....	\$328.74						
M-4 Taxes on Buildings & Yard Equipment	171.08						
M-5 Depreciation on Build- ings & Yard Equip... ..	292.14	791	96	288	04		
M-6 Outside Teaming & Trucking...				305	49		
M-7 Miscellaneous Outside Income...				252	55		
Total Income from Other Sources					891	18	
TOTAL PROFITS for year 1919					2055	13	

EXHIBIT I
FINANCIAL STATEMENT, JANUARY 1, 1920

ASSETS					
Current Assets					
A— 1 Cash on hand and in bank.....			2664	90	
A— 3 Accounts Receivable	6392	31			
Less					
A— 4 Reserve for Bad Debts.....	44	00	6348	31	
Total Current Assets					9013 21
Inventories					
✓— 5 Coal Stock			1309	03	
✓— 7 Wood Stock			1009	01	
A— 9 Operating Supplies:					
Office Supplies	126	82			
Automobile Supplies	32	70			
Truck Supplies	46	55			
Feed & Team Supplies	196	48			
Blacksmith Shop Supplies.....	48	52	451	07	
Total Inventories					2769 11
Deferred Charges to Operations					
A—10 Prepaid Insurance			218	65	
✓—11 Prepaid Rent			25	00	
A—12 Prepaid Credit Association			5	75	
A—14 Miscellaneous Deferred Charges			40	00	
Total Deferred Charges					289 40
Fixed Assets					
A—15 Land			9723	37	
✓—16 Buildings	\$3597.32				
A—17 Yard Equipment	1079.45				
✓—18 Movable Equipment	8754.86				
✓—19 Office Furniture	552.42	13984	05		
Less					
A—20 Reserve for Depreciation:					
Reserve December 31, 1918.....	\$3249.64				
Reserve in 1919	1630.67	4880	31	9103	74
Total Fixed Assets					18827 11
Total Assets					30898 83
LIABILITIES AND CAPITAL					
Current Liabilities					
L— 2 Accounts Payable	65	63			
L— 4 Accrued Taxes	284	42			
L— 5 Accrued Wages	115	35			
Total Current Liabilities.....			465	40	
Capital Liabilities					
L— 7 Proprietor's Capital			30433	43	
Total Liabilities and Capital.....					30898 83

Note: This sheet is commonly, and not improperly, called the Balance Sheet.

FORMS

Form C

DEFACITULATION OF CARLOT PURCHASES FOR YEAR-

[illegible]

Form D DECLARATION OF PURCHASES FROM OTHER RETAILERS FOR YEAR-

[illegible]

Form E

SALES SHEET MONTH OF _____ SOLD _____ PAGE _____

PACKING			NO	Price	Date	NAME	ADDRESS	QUANTITY	KIND	L.P.	Charges	Sales	No	How Paid	Cash Sales	Driver	Time
By Whom	Quant	Amount															
			01										01				
			02										02				
			03										03				
			04										04				
			05										05				
			06										06				
			07										07				
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			35										35				

SUMMARY

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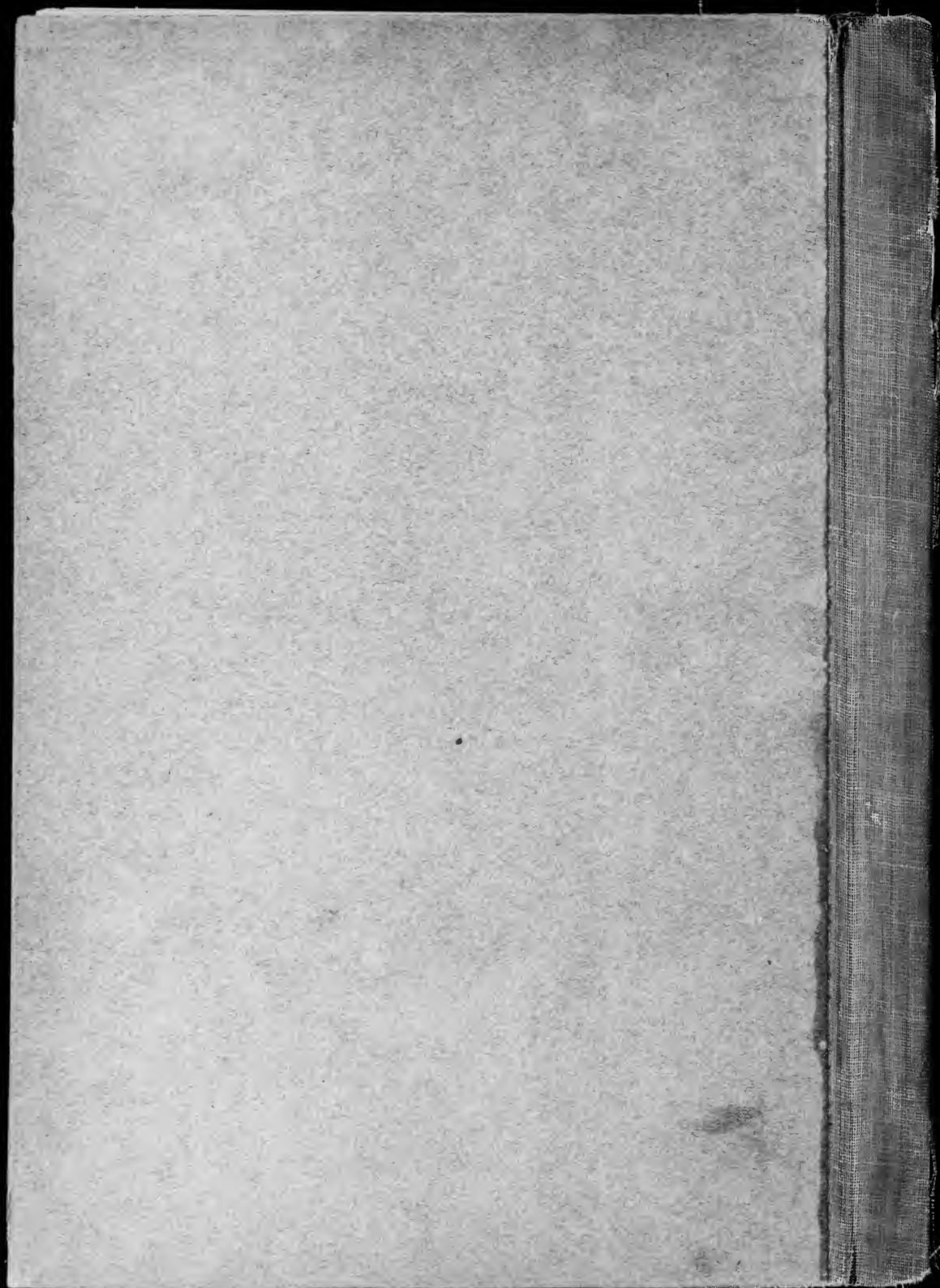


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**END OF
TITLE**